Australian Model Railway Association

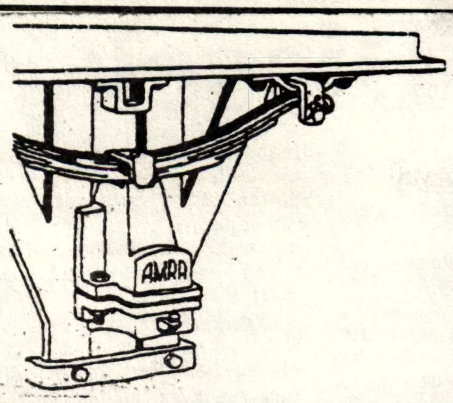
JOURNAL

March - April 1991

Volume 40
Number 201

Registered by Australia Post
Publication No VBH 1367

AT ISSN 0045-0715



Editorial

JOURNAL BOX . . .

Editorial

It was good to see so many interstate layouts and trade exhibitors at the Camberwell Exhibition, with representatives from South Australia, New South Wales, Queensland and Korea. The Exhibition organisers must be congratulated for bringing together such a wide range from Garden Railways to N Scale and many in between.

One of the aims of an exhibition such as this is to show to everyone as wide a range of models and equipment as is possible, and even if you model in some almost unknown scale, say In15" or 1/2 Z, there is likely to be something you yourself can identify with. The smallest working model railway in the Exhibition was about 50 mm diameter, and could be seen in the window of the toy shop on Stand 16, that delightful little railway originally created by Emmett of Punch in his cartoons of the Far Twittering and Oyster Creek Railway. I think that the biggest must have been the Brisbane N Scale Group's San Joaquin Valley, where N scale trains with up to 150 bogie vehicles at a time could be seen running.

Then, of course, that is what our hobby is about, the ability to model one's own scene, in whatever scale or gauge we choose. All it takes is a little imagination, coupled with the wish to produce something that is not only satisfying to ourselves, but if we wish, can be shown to others if we so choose.

Rex Little

On the Cover

East Mateland as displayed at the 1990 NSW Branch Exhibition at Liverpool.

Photo Jack Parker

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From the Managing Editor

Thank you for the offers of help with drawings for Journal. I have had three members respond and the first of those responses is in this issue (the drawings for Alan Higgs' article on BGM Delrin wheel bearings). These were drawn from the originals by Graham Turner.

An article on Transistor Controllers is being held over until next issue awaiting some more drawings.

This issue is quite large due to Tom Parkes article and the list of members. Alas, there is no Federal news in this issue. I can assure you it did not end up on the Editor's floor!

The cutoff for the next issue will be Tuesday 23 April. I expect this issue to be a little late in the post due to Easter.

I must endorse Rex's comments on the Victorian Branch Exhibition. Somehow, I always come away from an exhibition full of enthusiasm and much thought of what I'm 'gunner' do. That is, when I get around to it! I just wish I had more time (and money!).

Roger Lloyd

Deaf Wiv Diesels

by 'Wodge'

It was with exciting anticipation that I purchased my copy of Electronics for Model Railways 2 by Ken Stone. For in it was contained a project which would provide an enhancement to my (18!) British outline Lima diesels which I had only dreamed of in the past; namely, sound.

I read the article several times and, realising sadly that 18 on-board units would eventually cost a lot of money, opted for the larger under-baseboard version.

Then, Helen, my devoted companion (quite logically), pointed out that a single sub-baseboard unit was quite useless and could never cater for the regular comings and goings of a terminus station such as Harrington Street. 'What if', she queried, 'you have one diesel departing, while one is arriving, while one is idling stationary?' What imagination, what sense and logic, what cunning minds these strange creatures have.....so I ordered three 'on-board' versions.....for trial purposes you understand.

Within four days a package arrived containing my kits...a promptness I have come to expect from this reputable firm. But alas, to the sounds of groaning and weeping, no thpeakers, even though the kit listing (on the inside front cover), indicated the speaker as 'included'!

A written query to Ken Stone resulted in (yes, four days later!), another package containing not just three speakers, but three complete 'Executors'! Boy....did I have some fun!! And I now assume that the speakers ARE inclusive.

Anyway, after spending a week 'executing' the neighbours, the boss and the old girl dana fish 'n' chip shop, it was time to reluctantly remove the speakers and excitedly construct the kits. Construction was quite straightforward...just follow Ken's instructions in the book. I made the delicate task of soldering easier with the aid of my 'headband Optivisor'.

I completed all three kits at the same time (one long version and two short versions) and connected a 9 V battery to each in turn. To my delight they worked and not only that, but each version idled at a slightly different speed with a slightly different tone of 'throb' (due to the various resistor/transistor tolerance, it is assumed) which would add personality to each diesel host.

The sound at first was tinny, as Ken points out. But with the application of a sound box (I opted for a (cheaper!) rounded matchbox sleeve), one achieves instant volume, instant bass! Final tests were carried out by connecting the motor leads to a length of track containing a locomotive (diesel of course).

As they come, they are perfect for the modeller wanting a diesel sound to drown out the usual whine of an electric motor and grinding of gears (the optional supercharger via resistor 7 has to be heard to be believed!). But I'm a fussy devil and to my mind the unit seemed to rev higher than was necessary with regard to the speed of my locomotives particularly when running light or coasting into my terminus. (I employ two simple home made unsmoothed d.c. controllers with inertia as suggested in chapters 1 and 6 of Roger Amos's book, Practical Electronics for Railway Modellers 2.)

From observation and my own personal experience driving diesels, a train can be got moving in notch 1 (which closes the circuit breaker to the traction motors with the engine still idling) and, with a watchful eye on the ammeter, one wouldn't go to more than notch 3 when cautiously leaving a yard or similar, which puts our revs at about twice the idle speed.

Some customising was obviously necessary and as each unit seemed to have it's own particular speed characteristic, eventually applied to each motor cogging characteristic, different resistor values may be necessary.

So, I connected Dick Smith's resistor wheel in series with the motor leads from the track to tone down the motor revs to a more realistic value. A 1 - 3 Meg resistor providing complete satisfaction depending on unit/motor resistance. Mind you, if I owned a high revving 'Deltic' I would have left them as supplied.

The results accomplish slow movement of the locomotive at idle with only two to three times idle speed as the loco gets under way. It must be remembered that, unlike a steam locomotive, a diesel engine of a diesel-electric locomotive is totally divorced from its axles and thus may be heard idling at 160 kph or roaring its little heart out at 30. It all comes down to personal taste.

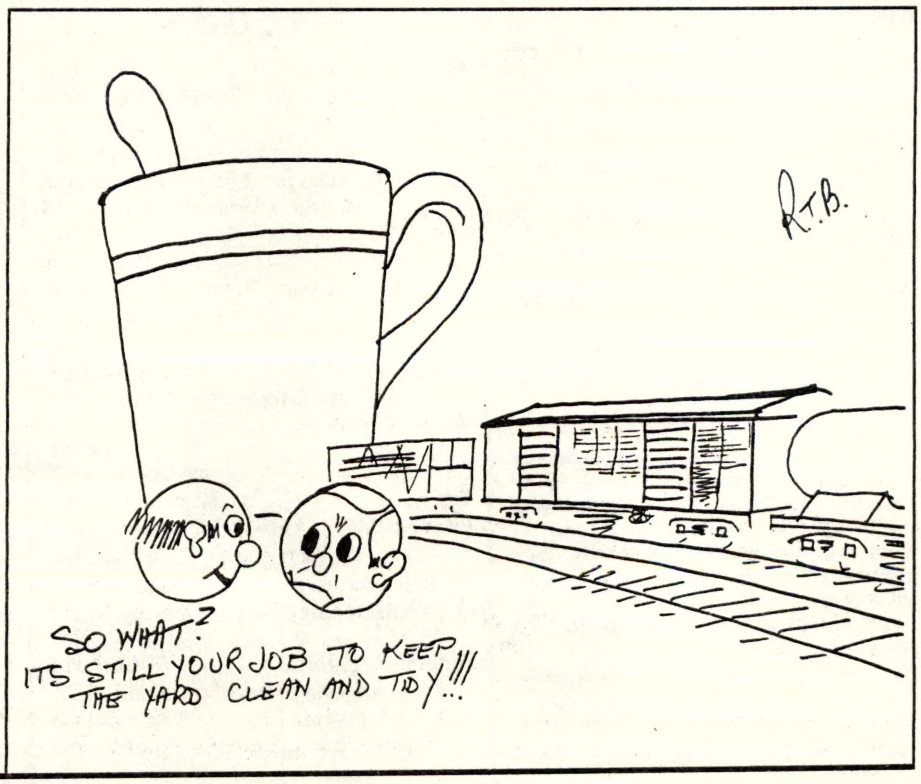
fitting is quite simple, once you've found the space! I removed the mild steel block and threw it away (...into the junk box) and replaced it with a few layers of lead flashing sufficient to fill the resulting hole in the fuel tank up to floor level. Blue-tack was used to secure all the components which allowed for repositioning when required. It's a good idea to run a file over the soldered side of the circuit board to flatten out any sharp tails (...with power off of course!) followed by a careful cleaning up, and do sandwich a piece of card between board and lead flashing otherwise a short WILL result.

The short versions are an easy fit into wide bodied (4 mm) locomotives, but if you opt for the battery on top of the unit, some surgery to the glazing roof is necessary. (The battery, always on after-thought, seems to be more troublesome than the unit!) The long version is intended for my Lima class 20s, but with a chunky motor in the centre, I'm still fiddling with the final positioning. (Hint: Lay the battery on top of the flat gear box, it adds weights!).

We now come to the biggest headache of all with these kits; namely, the switch. In the absence of any form of self latching reed switch(!), Ken has included a mini slide switch with the kit and its position is (sensibly) left to personal taste. I'm still using the battery snap as a switch which necessitates removing the bodies each time, prior to a running session, but I do believe I'm working toward a suitable invisible location somewhere just above the dummy bogie. Another method is to discard the switch altogether, cut one wire between the battery snap and PCB, project them out of the floor at some discreet location and use a matrix board pin and socket to make and break continuity. (Some ingenious modeller could even lash up a mini alternate push button switch using a sprung buffer!)

So there it is, and believe me, with the sound box on (it need only be 10 mm long), it drowns out everything in sight necessitating conversations in a raised voice (I'd hate to hear the larger version!). With three diesels droning around my terminus, you will excuse me if I keep saying 'Ay?' when next we meet!!!

Roger Carrell



Wheels and Wheelsets

by Tom Parkes

A delightful thing about railway modelling is that conformity and convention are not obligatory, and if the rolling stock, locomotives, road names and scenery are an achronistic mix, then that is the prerogative of the modeller. Modelling is for the enjoyment by the modeller as a free person. There are degrees of freedom, of course, and if smooth reliable operation is to be achieved, then adherence to certain standards will be necessary.

Standards for model railways include track and wheel dimensions, tyre profiles, couplers and coupler heights, direction of travel when d.c. is connected to the rails, plus clearances for platforms, cuttings and tunnels. Standards have been published by the BRMSB, NMRA, NEM and, of course, our own AMRA, standards are our guide. Other 'standards', such as that of Triang series 3 and 4, have been adopted by manufacturers for the toy market. For the record, the Triang label was changed to that of Hornby-Triang and then to Hornby, which is quite distinct from Hornby Dublo, that is now marketed by Wrenn. Incidentally, many items from the toy market have been adapted by scale modellers because of an appreciation of a particular outline or mechanism, and some years ago, a number of professional modellers were engaged in the business of reworking proprietory type locomotives to scale standards.

The use of the terms 'coarse scale', 'scale' and 'fine scale' follow on the remarks on reworking proprietory type equipment. A number of modellers have engaged in lengthy discussions on the subject of scale and, in particular, on the meaning of fine scale. It appears that code 83 track manufactured by Peco will be marketed in Australia - at a cost of $5.45 or so per length - and one modeller is understood to have stated that code 100 track (by Peco?) will no longer be available within five years time. While the flange depth of current Hornby equipment has been reduced somewhat from that of early Triang, significant changes would be required by major UK and European manufacturers to accommodate a market demand for equipment compatible with code 83 track. As a guess, the great bulk of the demand is by the toy market, and the products of the larger output manufacturers are obviously intended primarily for that market. The NMRA does seem to have some influence on the products for the US market, e.g. some Triang, Lima and AHM (Rivarossi?) equipment in the US does have scale type wheels and X2F couplers.

As a simplification, an arbitary classification would be to describe Triang type wheels and series 3 and 4 track as coarse scale, code 100 track with Shinohara and Peco electro frog type turnouts as scale, and track with codes 83 or 55 as fine scale. Standards for track, of necessity, must include standards for wheels and wheelsets. In addition, scale and fine scale terms could well require external dimensional accuracy with the prototype, plus authenticity of scenery, buildings, livestock, little people and faithfulness to a particular era. However, this article is about smooth reliable operation of wheels and wheelsets whether it be on home based or on a club scale layout.

Early Triang type wheelsets with the back to back dimension adjusted from 13.5 mm or so to approximately 14.5 mm were an improvement, but still tended to run into problems with Shinohara turnouts. A cure using a hacksaw to increase the flangeway depth was only partly effective. Conversely, early US 4-4-0 locomotives with leading wheels of 9 mm or less diameter fell into the large gaps in the frog area of so-called universal turnouts. The aim therefore was to transform tyre profiles into something approaching that of the NMRA RP-25 contour. The number of rejects in my case was sufficient to provide scenic detail for workshops and scrapyards on several layouts. A small TNC lathe eventually gave some assistance to the efforts, but the wheel performance was still not entirely satisfactory.

Then some years ago Peter Betts gave a most erudite lecture at Rockdale on rails and wheels, or more precisely, tyre profiles. Apart from several members who, it seemed, had never experienced any difficulties in operation, irrespective of obvious differences in wheelset and track, all other members were greatly impressed by the detailed analysis presented by Peter. The subsequent adoption of Peter's recommendations as AMRA standard specifications was a recognition and an appreciation of the depth of his research. As a result, the modifications to wheels with deep thick flanges was simplified and smoother running was achieved.

In view of the published standards on track, wheelsets and tyre profiles, there has been some surprise at Rockdale by statements attributed to members with a background of a number of years in the hobby to the effect that the fixed HO layout should have the capacity to provide smooth reliable operation for any type of equipment. Now on straight or very broad curves, there may be few problems, apart from deep flanges, irrespective of the wheelset dimensions and the tyre profile. For example, Triang equipment ran equally well, almost, as Athearn on Rivarossi hi-rail track on bakelite bases. However, problems arose when turnouts were added. Incidentally, Hamilton Ellis, in his book 'The Pictorial Encyclopaedia of Railways' mentions the primitive EKTROPI (turnouts) of Greece.

Turning back to the last (or, is it the second last?) decade of the 20th Century, some idea of the development of HO turnouts in standard gauge is given in Figures 1, 2 and 3 which illustrate respectively: a coarse scale turnout, as presented in the July 1964 issue of the Model Railway Constructor; a Peco SL95 RH turnout; and full size numbers 4, 6 and 8 turnouts from Paul Mallery's track work Handbook. For information, a two-part article by Clive Huggan, commencing in the May/June 1978 issue of AMRM under the heading 'Track Four' is a nice example of turnout construction using code 55 rail. There is a further article by Lindsay R Bennett with the title 'Construction of Turnouts the Easy Way' in the December 1989 issue of AMRM.

Tables 5 to 12 list dimensions for AMRA, BRMSB and NMRA standards and are well recommended for consideration in a plan to achieve smooth reliable operation on that home layout and as a necessity for interchange between layouts. For the benefit of members who do not have the time to plough through a series of tables, a transcription of some of the significant HO dimensions for standard gauge, with AMRA abbreviations as listed in Table 2 is shown at foot of this page.

As has been stated elsewhere, the BRMSB dimensions could present difficulties since BB and S are equal in both HO and OO (14.50 and 14.00 mm respectively) and there are also equalities between BF and C. Similarly the NMRA rail check gauge, C, is equal to BF in RP 3 & 4. The flange contours may assist, of course, but such dimensions could be a shade tight for average modelling skills. A reduction of the minimum rail check gauge, C, from 15.60 mm to 15.40 mm in the NMRA dimension would provide for a similar difference between BB and S, i.e. 0.10 mm.

So for that average (mean, mode of median?) modeller 'scale' type equipment may well have the greater attraction - for the present. But, quite clearly, some of those early models from the 50s, 60s and the 70s and 80s could have difficulty in negotiating track work to AMRA and NMRA RP 4-5 dimensions, and would fail completely on, say, fine scale code 83 and 55 track work, unless significant changes were made to wheelset dimensions and flange profiles.

With the Editor's permission, a subsequent article on upgrading non-scale wheels and wheelsets with fairly simple 'workshop plant' will be completed for publication. In the meantime, do appreciate that wheels and track work must be compatible, and should you desire to try some changes, keep an alert eye for a handy blue and white striped apron as an essential item of workshop plant - purists and cynics beware!

HO Standard Gauge Dimensions (mm)

Dimension	AMRA	BRMSB		NMRA	
	(Table 4)	HO	OO	RP 4-5	RP 3 & 4
BB minimum	14.25	14.50	14.00	14.50	14.80
BF maximum	15.25	15.50	15.00	15.30	15.60
S maximum	14.10	14.50	14.00	14.30	14.70
C minimum	15.15	15.50	15.00	?	15.60

Table 4 (AMRA) abbreviations are as follows:
BB - back to back of flanges
BF - back to front of flanges
S - outside to outside of wing and guard rails
C - track check gauge (inside of running rail to outside of guard rail).
Note that NMRA RP 3 & 4 are for fine scale.

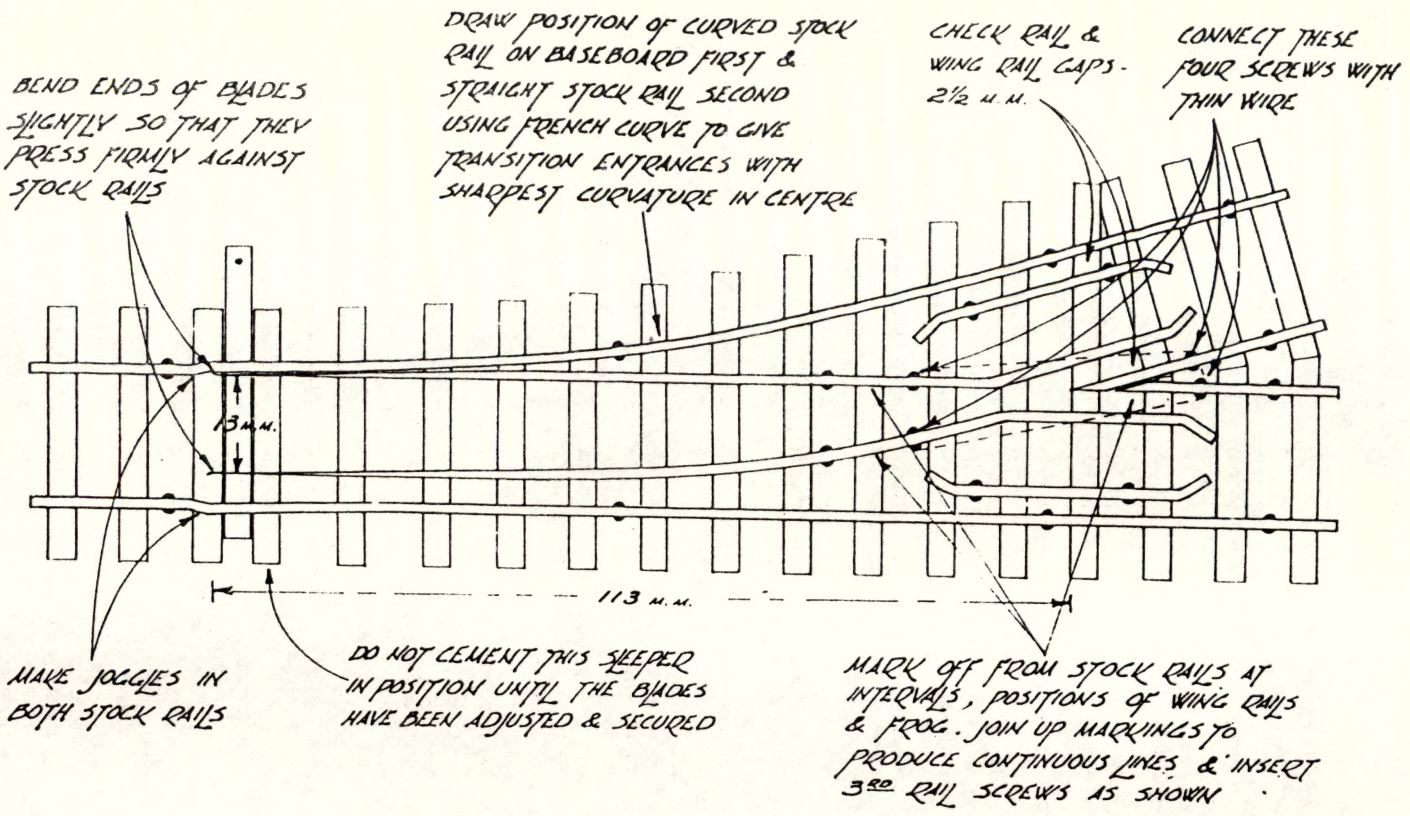
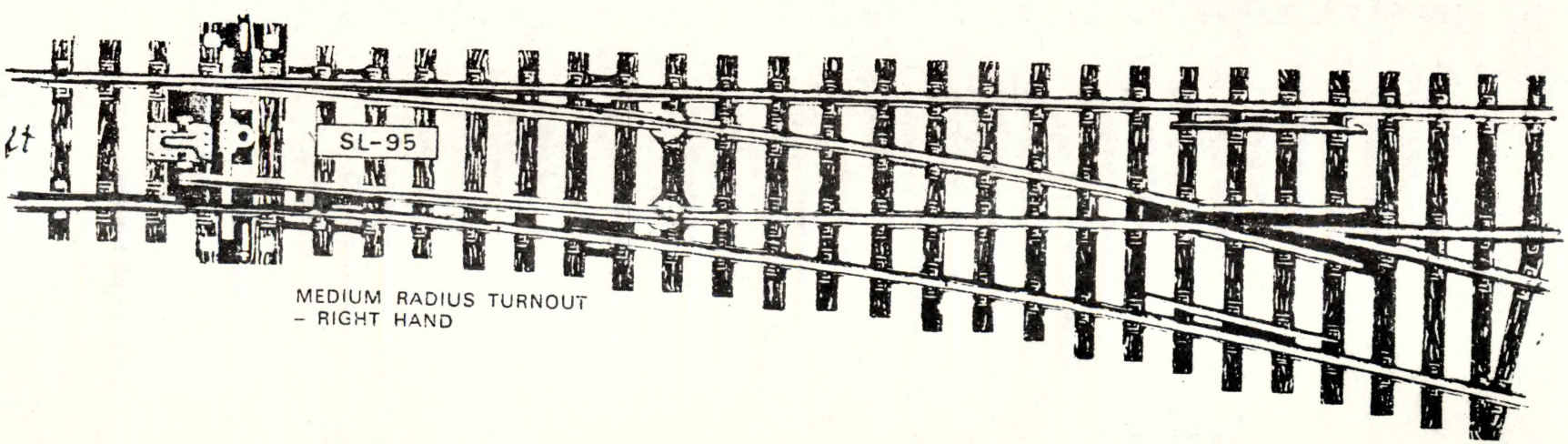


Figure 1



MEDIUM RADIUS TURNOUT
– RIGHT HAND

Figure 2

Figure 3

AREA Standard Turnouts

Full-Size HO Templates

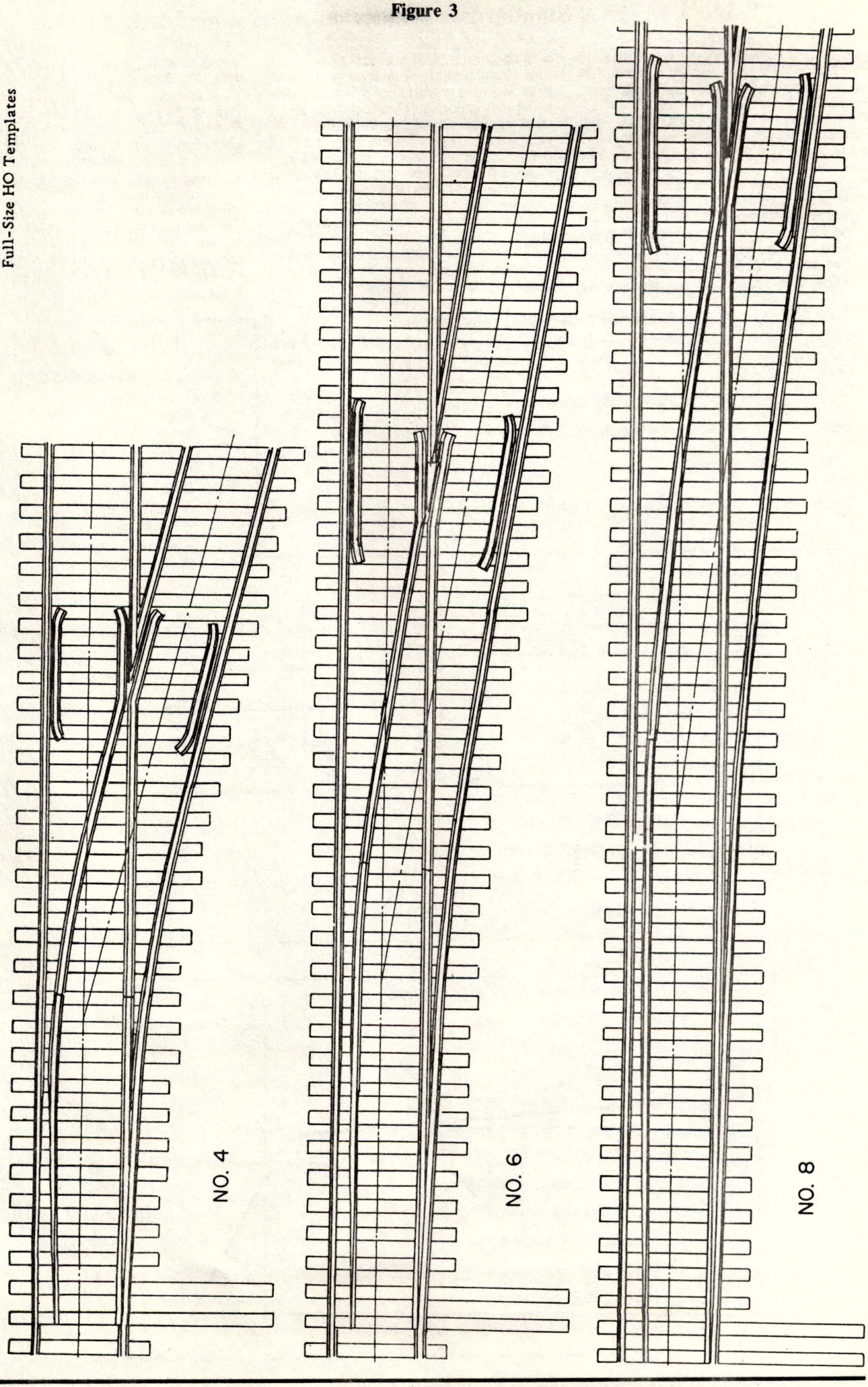


Table 1 AMRA Standards - Wheels on Axles and Track Work

The first table gives the recommended or nominal dimensions which all modellers or manufactures should try to achieve. However, because of errors which are always present in manufacturing and measuring processes, the recommended values will not be truly attained. The second table gives the limiting dimensions. These represent the maximum that the dimensions may depart from their nominal values before approaching critical limits. If these limits are not breached, complete running reliability and interchangeability will ensure.

These dimensions are intended for all manufacturers. However, it is appreciated that manufacturers who wish to produce items intended primarily as table top models, will find it impossible to comply with all the track and wheelset dimensions, due to the need to employ very sharp curves and extra deep flanges. If this is the case, such manufacturers should increase G on curves according to the formula on page 9 and increase F1 by a similar amount, even though this may result in breaching the limiting dimensions for G and F1. The instabilities that would result from increasing these dimensions may be overcome by specifying values of N greater than those recommended, according to the formula N = 2 F1. There is no reason for these manufacturers not to comply with the dimensions given in the tables for BB, BF, T and C and in the interests of interchangeability of rolling stock, it is essential that they do comply with them.

Some nominal and limiting dimensions are not listed in the tables. This is because their values are governed by other listed dimensions, (see notes), or their limiting values are governed only by practical considerations which do not effect interchangeability (e.g. N max, D min and T min).

Recommended Dimensions (millimetres)

	32 mm gauge	22.5 mm gauge	16.5 mm gauge	12 mm gauge	9 mm gauge
G	32.0	22.5	16.5	12.0	9.0
F1 and F2	2.0	1.5	1.25	1.05	0.95
BB	28.6	20.3	14.4	10.2	7.4
T	1.2	0.85	0.7	0.6	0.5
N	4.4	2.7	2.7	2.3	2.1

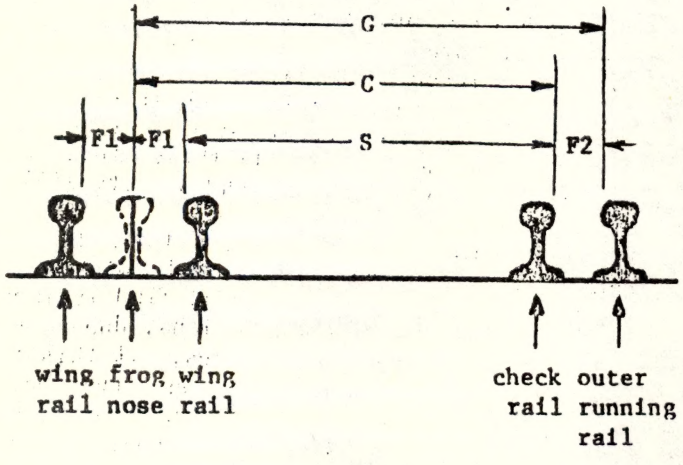
Note

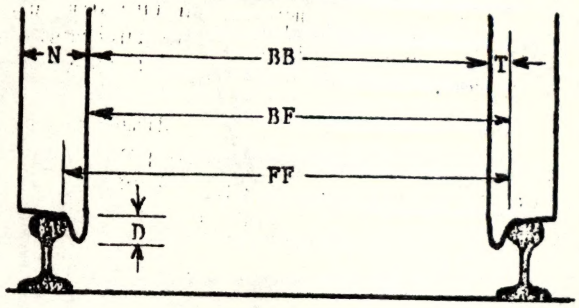
The recommended dimensions for S, C, BF and FF are given by the formulae:
C = G - F2, S = G - F1 - F2, BF = BB + T, FF = BB + 2 T

Table 2 (below)

Nomenclature

G	Track gauge
C	Check gauge
S	Span
F1	Crossing flangeway
F2	Check flangeway
BB	Back to back
BF	Effective back to front
FF	Effective front to front
T	Effective flange width
D	Flange depth
N	Tyre width





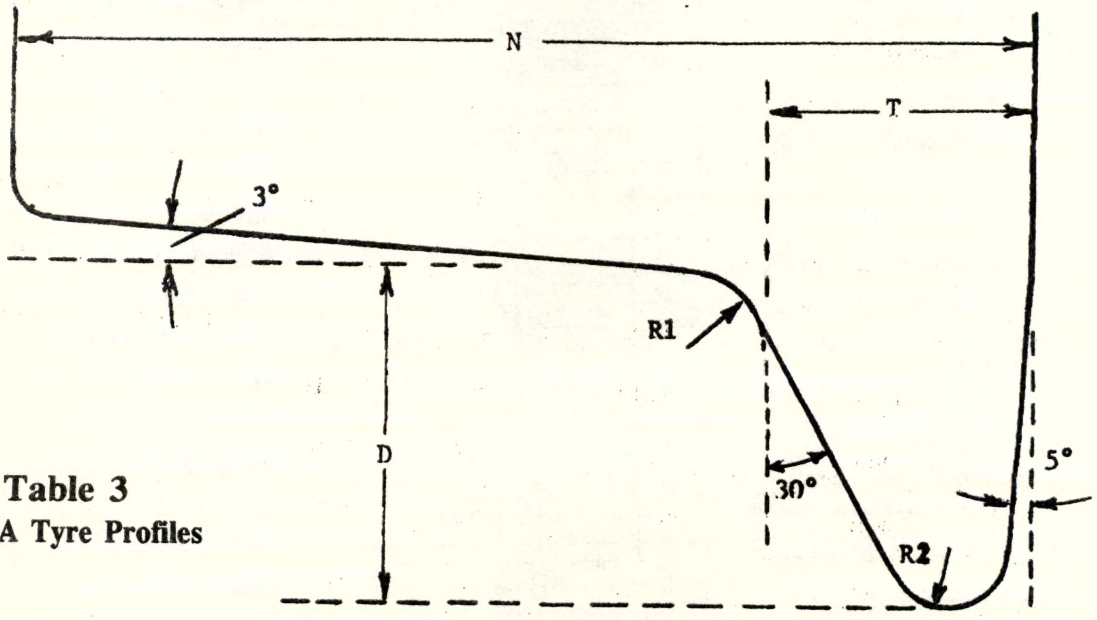


Table 3
AMRA Tyre Profiles

Table 3 Tyre Profiles

	Recommended Dimensions (millimetres)				
	32 mm gauge	22.5 mm gauge	16.5 mm gauge	12 mm gauge	9 mm gauge
N	4.4	2.7	2.7	2.3	2.1
T	1.2	0.85	0.7	0.6	0.5
D	1.5	1.1	0.9	0.8	0.6
R1	0.4	0.3	0.2	0.15	0.1
R2	0.2	0.15	0.15	0.1	0.1

Notes

1 Permissible variations on the recommended dimensions are subject to the limiting dimensions given on page 6 and also to the condition that the taper angle of the flange front should not be less than 20 degrees nor more than 45 degrees.

2 Manufacturers who find it necessary to specify values of D greater than those recommended, should nevertheless comply

Table 4 AMRA Limiting Dimensions (millimetres)

Permissible variations on the recommended dimensions are subject to the following limiting dimensions.

	32 mm gauge	22.5 mm gauge	16.5 mm gauge	12 mm gauge	9 mm gauge
G max	32.40	22.83	16.75	12.22'	9.22
G min	31.87	22.38	16.40	11.93	8.93
C min	29.87	20.88	15.15	10.88	7.98
S max	28.13	19.62	14.10	9.97	7.17
F1 max	2.10	1.57	1.30	1.10	1.00
BB min	28.40	19.83	14.25	10.07	7.27
BF max	30.00	21.02	15.25	10.93	8.03
T max	1.37	0.98	0.85	0.76	0.66
D max	1.60	1.20	1.00	0.80	0.70
N min	4.00	2.7	2.50	2.15	1.95

Notes

1 The maximum dimensions for FF is given by BF max + T max.

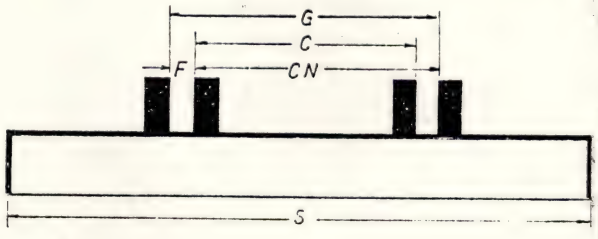
2 The minimum dimensions for the flangeways are given by the formulae:

F1 min = C min - s max

F2 min = G min - S max - F1 max

3 Wheels may not run out of round in excess of 0.05 mm in any diameter.

Table 5 BRMSB Track Standards



	C maxi	F mini	G mini	CN mini	S	Sleeper width
TT3- Gauge (12.0	9.50	1.25	12.00	10.75	25.00	2.50
HO Gauge (16.5)	14.50	1.00	16.50	15.50	32.00	3.50
OO Gauge (16.5)	14.00	1.25	16.50	15.00	32.00	3.50
EM Gauge (18.0)	16.00	1.00	18.00	17.00	36.00	3.50
S Gauge (7/8")	19.05	1.60	22.23	20.62	45.00	4.75
OF Gauge (fine) (32.0)	28.50	1.75*	32.00	30.25	63.00	6.00#
O Gauge (Coarse) (32.0)	27.00	2.50	32.00	29.50	76.20^	9.52**
1 Gauge (44.50)	38.50	3.0	44.45	41.50	90.00	9.52**
1F Gauge (fine) (45.00)	41.50	1.75	45.00	43.25	90.00	9.50**

* Increase to 2.25 on curves under 4'0" radius.

\# Increase to 7.00 for crossing timbers

^ 3" actual

** 3/8" actual. Increase to 12.70 (1/2") for crossing timbers.

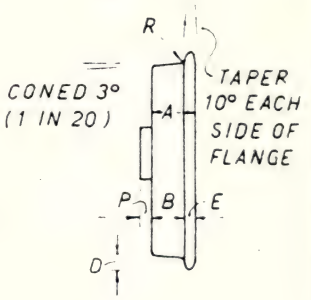
All dimensions are millimetres unless otherwise stated.

Table 5 (continued) - BRMSB Wheels

	A	B	D	E	P	R
TT3 Gauge (12.0)	2.25*	1.75	0.70	0.50	0.25	0.50
HO Gauge (16.5)	2.00	1.50	0.75	0.50	0.25	0.50
OO Gauge (16.5)	2.50	2.00	1.00	0.50	0.25	0.50
EM Gauge (18.0)	2.50	2.00	1.00	0.50	0.25	0.50
S Gauge (7/8")	3.15	2.39	1.00	0.75	0.25	0.50
0 Gauge (Coarse) (32.0)	5.00	3.50	1.50	1.50	0.50	0.50
OF Gauge (Fine) (32.0	3.75	2.75	1.25	1.00	0.50	0.50
1 Gauge (44.4) 6.00	4.50	2.00#	1.50	0.50	0.50	0.50
1F Gauge (Fine) (45.0)	5.00	4.00	2.00#	1.00	0.50	0.50

* Tri-ang 2.75

\# 1.50 if sprung axle guards



Limits

Col A +.002, -0 in gauges TT3 to S
+.005, -0 in gauges 0 and 1 and 1F
Col D -.005, +0 in all gauges
Col E -.002, +0 in gauges TT3 to S
-.005, +0 in gauges 0 and 1 and 1F

BSMRB Wheels on Axles

	A	B	C	X	Y
TT3 Gauge (12.0)	1.83*	10.32#	10.81	-	-
HO Gauge (16.5)	1.83*	15.00	15.50	24.00	19.50
00 Gauge (16.5)	1.83*	14.50	15.00	27.00	20.00
EM Gauge (18.0)	1.83*	16.50	17.00	27.00	22.00
S Gauge (7/8")	2.03**	19.85	20.64	32.00	26.27
0 Gauge (Coarse) (32.0)	2.38^	28.00	29.50	48.00	39.00
OF Gauge (Fine) (32.0)	2.38^	29.00	30.00	45.00	37.50
1 Gauge (44.4)	3.18~	40.00	41.50	62.00	53.00
1F Gauge (Fine) (45.0)	3.18~	42.00	43.25	62.00	53.00

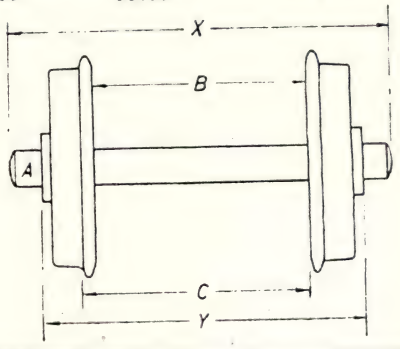
* 15 swg

** 14 swg

\# 10.00 in Triang

^ 3/32"

~ 1/8"



Limits

Col B +.005 in gauges TT3 to S
Col X +.010 in gauges 0 to 1
All above dimensions in millimetres unless otherwise stated.

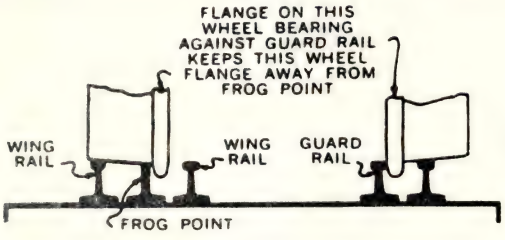


FIG. 1

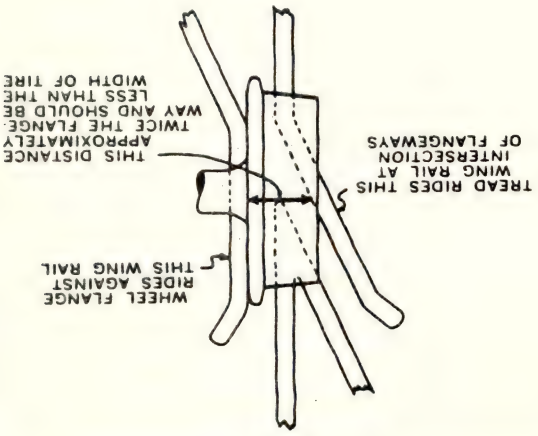


FIG. 2

Table 6 NMRA Track and Wheel Relationships

To ensure interchange and reliable performance, NMRA Standards S-3 and S-4 are designed so that Track and Wheels constructed within prescribed limits will meet the following related conditions closely parallel to prototype practices.

1 Track Gage (Gin S-3) is the distance between railheads of two Stock (running) Rails of a length of Track.

a Straight (tangent) track should be laid as close to the minimum limit of Track Gage as practicable.

b Curved track may increase Track Gage as curve sharpness increases, with such increase applied with care lest the wheel be inadequately supported by the railhead, and sidesway of equipment be exaggerated.

c Three-point track gages should be so-constructed as to fulfil these requirements.

Track Check Gage (C in S-3) is the distance from the flange-side of a Guard Rail to the flange-side of the Frog it guards.

Wheel Check Gage (K in S-4) is the distance from the Back of the flange of one wheel to the tread-side of the flange of the other wheel of a wheelset.

a Maximum Wheel Check Gage should not exceed the minimum Track Check Gage so that Guard rails will protect the Frog. See Fig 1.

Span (S in S-3) is the distance between flange-sides of the Guard and Wing Rails at the guarded Frog.

Back-to-Back (B in S-4) is the distance between the Backs of the wheel flanges in a wheelset at railhead height.

a Maximum Span should be less than the minimum Back-to-Back distance.

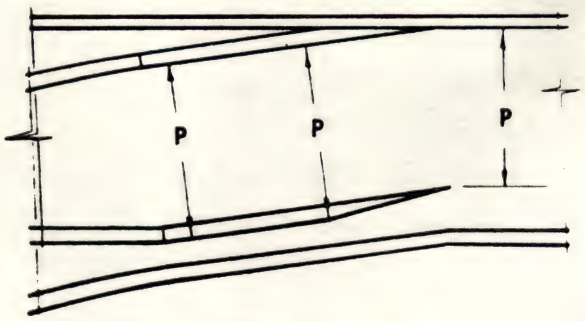


FIG. 3

4 Flangeway Width (F in S-3) is the distance between flange-sides of the Wing and Frog Rails.

Tire Width (N in S-4) is the distance between the Back of the wheel flange at railhead height and the outer edge of the wheel tread.

a Maximum Flangeway Width at the point of the Frog should be less than half the minimum Tire Width to ensure the wheel tread riding the Wing Rail across the intersection of the flangeways until it is supported by the Frog Point Rail. See Fig 2.

b Guard Rail Flangeway Width is limited at its maximum only by Track Gage and Check Gage (G and C).

5 Flange Clearance (H in S-3) is the vertical distance from the railhead to the highest obstruction below it.

Flange Depth (D in S-4) is the vertical distance from the root of the flange to its outer edge.

a Minimum Flange Clearance should not be less than the maximum Flange Depth.

6 Switch Point Spread (P in S3) is the distance from the Gage Line of the closed Point Rail to the outside of the open Point Rail. See Fig 3.

a Maximum Spread (mechanical) should not exceed the sum of minimum Back-to-Back plus minimum Flange Width (Bmin + Tmin) to prevent interference.

b Maximum Spread (electrical) should not exceed the dimension of 6a above, minus 0.005" to prevent short circuit between Point and Stock Rails of opposite polarity where this condition exists.

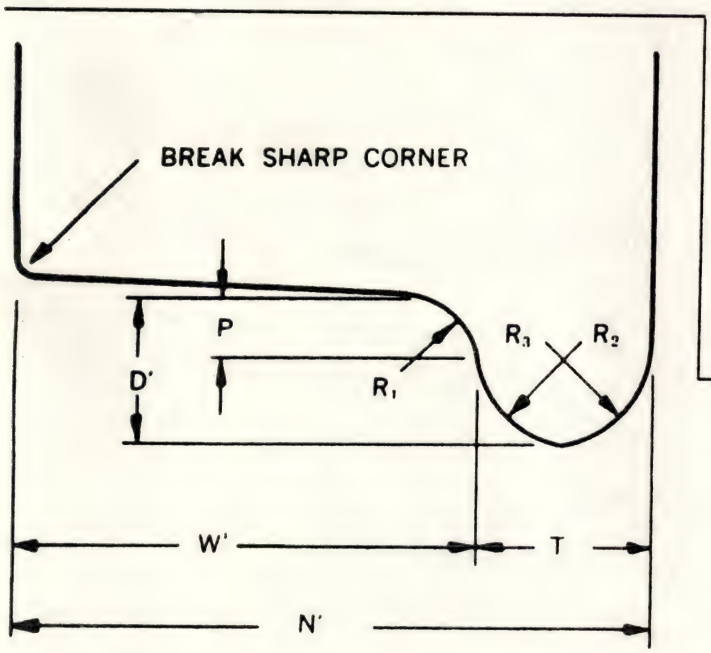


Table 7 NMRA Wheel Contour

This wheel contour is specified for optimum track holding ability and most prototypical appearance within the interchange limits of NMRA Standard S-4.

Wheels of this contour will perform at their best on track conforming to the limits of NMRA Standard S-3 and consistent with RP-10, RP-11 and RP-12.

Code	Tire Width N'	Flange Width T	Tread Width W	Flange Depth D'	Gaging Point P	Fillet Radius R1	Inner Radius R2	Outer Radius R3
175	.175	.048	.127	.045	.015	.025	.028	.028
126	.126	.036	.090	.028	.012	.018	.021	.021
116	.116	.031	.085	.026	.011	.014	.018	.018
110	.110	.030	.080	.025	.010	.014	.018	.018
88	.088	.025	.063	.023	.008	.012	.015	.015
79	.079	.023	.056	.020	.008	.011	.014	.014
72	.072	.020	.052	.020	.008	.010	.012	.012
54	.054	.014	.040	.016	.007	.008	.009	.009

Notes

1 Wheels listed above provide a selection meeting the interchange requirements of Standard S-4 and RP-4 in all scales 0 and smaller.

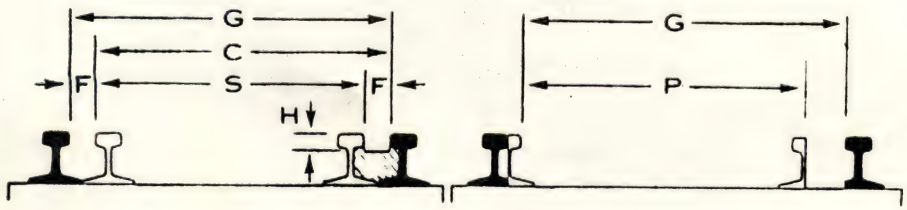
2 N' and D' are Nominal 'design dimensions' providing reasonable tolerance within the limits specified by N and D of Standard S-4.

3 Dimensions T and W are measured at the Gaging Point P which approximates the point of tangency between R1 and R2.

4 Radii at the edge of the flange should be as large as possible within prescribed limits to reduce side friction against the railhead, to protect Frog Points by decreasing effective Wheel Check Gage, and to guide the flange through flangeways and past other obstructions.

5 Tread Taper is not required, but 1 degree to 3 degree mold release draft is allowed. Note that NEW prototype wheels include a taper in anticipation of wear. WORN wheels show a reverse taper. Model wheels are often subject to a buildup of track 'dirt' that adds an effective taper.

Table 8 NMRA Proposed Standard S-3 Track Work



continued next page

Name of Scale	Track Gage (Min/Max) G	Check Gage (Min) C	Span (Max) S	Flangeway (Max) F	Flange Clearance (Min) H	Switch Point Spread (Max) (Elec/Mech) P
1" Scale	4.750" (120.7 mm)	4.581	4.429	.220	.156	-
	4.910 (124.7 mm)	(116.4 mm)	(112.5 mm)	(5.59 mm)	(3.96 mm)	4.536(115.2 mm)
3/4" scale	3.500* (88.9 mm)	3.349	3.212	.181	.125	-
	3.605 (91.6 mm)	(85.1 mm)	(81.6 mm)	(4.60 mm)	(3.18 mm)	3.312 (84.1 mm)
1/2" scale	2.500* (63.5 mm)	2.383	2.276	.134	.094	2.351 (59.7 mm)
	2.566 (65.2 mm)	(60.6 mm)	(57.8 mm)	(3.40 mm)	2.39 mm)	2.356 (59.8 mm)
3/8" scale	1.766* (44.9 mm)	.1674	1.590	.106	.062	1.648 (41.9 mm)
	1.820 (46.2 mm)	(42.5 mm)	(40.4 mm)	(2.69 mm)	1.57 mm)	1.653 (42.0 mm)
0 scale	1.250* (31.8 mm)	1.179	1.115	.079	.047	1.159 (29.4 mm)
	1.285 (32.6 mm)	(29.9 mm)	(28.3 mm)	(2.01 mm)	(1.19 mm)	1.164 (29.6 mm)
On3	.750* (19.1 mm)	.705	.664	.053	.030	.690 (17.5 mm)
	.778 (19.8 mm)	(17.9 mm)	(16.9 mm)	(1.32 mm)	(0.76 mm)	.695 (17.7 mm)
On2	.500* (12.7 mm)	.455	.414	.050	.028	.440 (11.2 mm)
	.522 (13.3 mm)	(11.6 mm)	(10.5 mm)	(1.27 mm)	(0.71 mm)	.445 (11.3 mm)
S scale	.875* (22.2 mm)	.823	.775	.057	.031	.807 (20.5 mm)
	.898 (22.8 mm)	(20.9 mm)	(19.7 mm)	(1.45 mm)	(0.79 mm)	.812 (20.6 mm)
Sn3	.563* (14.3 mm)	.519	.478	.050	.028	.504 (12.8 mm)
	.586 (14.9 mm)	(13.2 mm)	(12.1 mm)	(1.27 mm)	(0.71 mm)	.509 (12.9 mm)
00 scale	.750* (19.1 mm)	.705	.664	.05	.028	.690 (17.5 mm)
	.772 (19.6 mm)	(17.9 mm)	(16.9 mm)	(1.27 mm)	(0.71 mm)	.695 (17.7 mm)
HO scale	.649* (16.5 mm)	.605	.564	.050	.028	.590 (15.0 mm)
	.672 (17.1 mm)	(15.4 mm)	(14.3 mm)	(1.27 mm)	(0.71 mm)	.595 (15.1 mm)
HOn3	.413* (10.5 mm)	.377	.344	.040	.026	.364 (9.25 mm)
	.429 (10.9 mm)	(9.58 mm)	(8.74 mm)	(1.02 mm)	(0.66 mm)	.369 (9.37 mm)
HOn2	.276* (7.01 mm)	.246	.219	.033	.022	.235 (5.97 mm)
	.290 (7.37 mm)	(6.25 mm)	(5.56 mm)	(0.84 mm)	(0.46 mm)	.240 (6.10 mm)
TT scale	.471* (12.0 mm)	.437	.406	.036	.026	.425 (10.8 mm)
	.483 (12.3 mm)	(11.1 mm)	(10.3 mm)	(0.91 mm)	(0.66 mm)	.430 (10.9 mm)
N scale	.353* (8.97 mm)	.323	.296	.033	.022	.312 (7.92 mm)
	.367 (9.32 mm)	(8.20 mm)	(7.52 mm)	(0.84 mm)	(0.56 mm)	.317 (8.05 mm)
Nn3 (40")	.250* (6.35 mm)	.229	.210	.025	.020	.219 (5.56 mm)
	.263 (6.68 mm)	(5.82 mm)	(5.33 mm)	(0.64 mm)	(0.51 mm)	.224 (5.69 mm)
Z scale	.257* (6.53 mm)	.236	.217	.025	.020	.226 (5.74 mm)
	.270 (6.86 mm)	(5.99 mm)	(5.51 mm)	(0.64 mm)	(0.51 mm)	.231 (5.87 mm)

* Denotes Preferred Dimension for Tangent Track (see Note 2)

Notes

1 The F limit applies only to the wing rail, and the C limit applies only to the guard rail. Both apply to the same rail only in special work such as a crossing.

2 For Gage widening in curves for long wheelbase equipment see RP-8.

3 For a full discussion of minimum radius, minimum turnout and radius equivalents of degrees of curvature, etc, see S-8 and RP.11.

4 Guard and wing rails shall be flared to a minimum dimension across the flared flangeway end of 1.5 x Fmax. Flare angle shall not exceed 10 degrees, and the Flare must disappear before reaching the working area of its rail.

Table 9 Hi-Rail - Wheels

NMRA Standards are the primary System for Interchange. For those modellers undergoing transition between Ready-to-Run and Scale Model Railroading according to NMRA Standards these alternate Systems are provided. Wheels and Track made to these specifications will NOT interchange with those made to conform to NMRA Standards.

See RP-4 for diagram illustrating dimensions, and see RP-3.5 for related TRACK Systems.

Note that these Systems are not developed or controlled by NMRA. For scales where overseas manufacture predominates, applicable NEM/MOROP Standards, modified to agree with observed practice, are shown. For scales where domestic manufacture predominates, dimensions reflecting observed practice in the field are shown. While believed to be reasonably accurate, these dimensions must be followed with reservations, and NMRA cannot be responsible for their accuracy.

Although presented here as standard gage (4'8-1/2") Systems, these limits may also serve for appropriate narrow gage of a larger scale. Thus: 'G Gauge', 1 metre (39.37") gage in 1:22.5 scale, uses No 1 System dimensions.

Name of Scale	Scale to Foot	K Check Gage Max	B Back to Back Min	N Tire Width Min	D Flange Depth Max	T Flange Thickness Max
No 1	3/8"	1.652	1.567	.244	.118	.087
		(42.0)	(39.8)	(6.2)	(3.0)	(2.2)
0	1/4"	1.156	1.093	.230	.094	.063
		(29.4)	(27.4)	(5.8)	(2.4)	(1.6)
S	3/16"	.777	.705	.172	.093	.065
		(19.7)	(17.9)	(4.4)	(2.4)	(1.7)
HO	.138"	.604	.563	.110	.047	.035
		(15.3)	(14.3)	(2.8)	(1.2)	(0.9)
N	.075"	.320	.291	.087	.035	.024
		(8.1)	(7.4)	(2.2)	(0.9)	(0.6)
Z	.055"	.230	.207	.061	.024	.018
		(5.8)	(5.3)	(1.5)	(0.6)	(0.5)

Continued page 42

Table 10 NMRA Proto - Scale The New RP-3 and RP-4 Proposal

For several years, a growing number of modellers have been interested in a higher level of fidelity to scale in the track and wheel relationship of their respective scales. In some scales, there have existed movements to increase the accuracy, to the point of actually modelling the prototype dimensions in every regard. One of the drawbacks to this approach is that special considerations must be made for the tighter scale turn radius that we generally use in model railroading, when compared to the prototype. Still, by using computer model studies, the NMRA Engineering Department has been able to define the acceptable limits under which a given scale model will reliably operate. The proposed Recommended Practice (RP-3 and RP-4) sheets are the culmination of these studies and three years of input from the modelling public.

Some explanations are in order about the scales, names and relationship to existing model work. First, looking at the name, we have established the Proto:Scale name to reflect the reduction of actual prototype dimensions, based on the ratio of the model to the prototype. For example, 1/2" = 1' is 1/24th scale, or Proto:24. In S scale (3/16" = 1' or 1/64th scale) and smaller sizes, the dimensions are somewhat larger than actual prototype practice. For that reason, they are designated as Fine Scale, to differentiate them from the more precise Proto: Scale.

All of the Fine Scale track/wheel relationships are based on current narrow gauge practice for the given scale. Additional consideration has been given to what supplies are available to support a given scale in the market place today. These factors were considered after extensive input from modellers just like yourself. While some modellers are using the exact scale dimensions in these smaller scales, they agreed that Proto:87 or Proto:160 probably isn't for everyone, just yet. It is important to note that Proto: Scale dimensions will be added to the RP-3/RP-4 system, as interest and manufacturing efforts develop. The proposed RPs do not represent the end of our efforts, but are a springboard for future activity.

Let's take a look at the HO Fine Scale as an example. We find that it is fully compatible with existing HOn3 models, so dual gaging would be possible, with improvements in operation and appearance. There are wheelsets currently available (North West Short Line) in the newly proposed size so that freight and passenger cars could be converted immediately. By demonstrating acceptance of the numbers to the manufacturers, it would be very likely that locomotive conversion products would follow quickly.

At this point, many readers might be wondering what will become of the existing standards for HO. The fact is, they will continue to remain on the NMRA books, with no change. It is very important to understand that this proposal is for new, stand alone, track/wheel relationships. They are not meant to replace any existing NMRA Standard, but serve as an alternative for those modellers interested in pursuing a closer model to prototype relationship. In Proto:48, the nearly two years of development that has taken place has added new modellers to 1/4" scale, not splintering the existing market. A host of new products has appeared and the effort has been one of the most highly successful in NMRA history. So these new scale systems pose no threat to current N, HO or other scales. They simply provide a guide post for those modellers dissatisfied with the appearance of the existing Standard.

Speaking of guide posts, the Recommended Practices are just that. Some modellers look at the flange depth, for example, and think that the dimension called out is the only one they may use. To better understand the value of the RPs, think of the dimensions as an envelope, or limit. It would be very much like painting a line down a street; the RP tells you how close you can paint the line to the curb, without having a problem. So, in the case of flange depth, it states that you cannot make it deeper than a certain amount, but it does not say you cannot make it smaller, if you want to do that.

Finally, this proposal brings with it, new dimensions for scales that have not yet developed significantly. This is a radical departure for our organisation, where many manufacturers once entered into a new scale venture before NMRA stepped in to provide guidance and ensure interchange. We have listened to your comments, to your needs, and carefully examined the resources in the hobby today to preactively develop these dimensional packages. As I said earlier, your desires, in conjunction with developments, will add more of these packages to the NMRA Engineering Department's charge. We hope you will like what you see and support this new proposal.

Randy Wilson - Chairman
NMRA Proto: Scale Committee No 636
2840 Oak Drive
San Ramon, California 94583
2-11-89

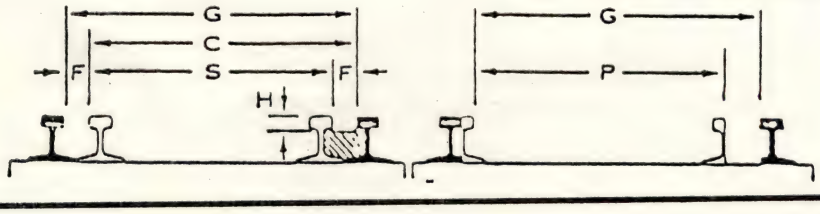
Table 11 NMRA Proto - Fine Scale - Track

NMRA Standards are the Primary System for interchange for standard gauge (4'8-1/2") in each scale. The narrow gauge (n3) Standards developed years later are built around closer to scale wheels and flangeways will be compatible with their standard gauge.

Scales large enough to use scale width wheels carry the designation 'Proto' with their scale ratio, while smaller scales using overscale (but narrower than Standard) width wheels are designated as 'Fine'. See related Wheel systems in RP-4.

Name of Scale	Scale or Ratio	Track Gage (min/max) G	Check Gage (min) C	Span (max) S	Flangeway (max) F	Flange Clearance (min) H	Switch Point Spread (max) P
Proto 24	1/2"	2.354* (59.8)	2.265	2.184	.104	.063	2.239 (56.9)
		2.409 (61.2)	(57.5)	(55.5)	(2.64)	(1.60)	2.244 (57.0)
Proto 24n3	1/2"	1.500* (38.1)	1.411	1.330	.104	.063	1.385 (35.2)
		1.55 (39.5)	(35.8)	(33.7)	(2.64)	(1.60)	1.390 (35.3)
Proto 32	3/8"	1.766* (44;.8)	1.699	1.638	.079	.047	1.678 (42.6)
		1.808 (45.9)	(43.2)	(41.6)	(2.00)	(1.19)	1.683 (42.8)
Proto 32n3	1/8"	1.125* (28.6)	1.058	.997	.079	.047	1.037 (26.3)
		1.167 (29.6)	(26.9)	(25.3)	(2.00)	(1.19)	1.042 (26.5)
Proto 48	1/4"	1.77* (29.9)	1.132	1.091	.053	.031	1.117 (28.4)
		1.205 (30.6)	(28.8)	(27.7)	(1.35)	(0.79)	1.122 (28.5)
S Fine	1:64	.883* (22.4)	.839	.799	.053	.030	.819 (20.8)
		.905 (23.0)	(21.3)	(20.3)	(1.35)	(0.76)	.829 (21.1)
HO Fine	1:87.1	.649* (16.5)	.613	.580	.040	.026	.600 (15.2)
		.665 (16.9)	(15.6)	(14.7)	(1.02)	(0.66)	.605 (15.4)
TT Fine	1:120	.471* (12.0)	.441	.414	.033	.022	.430 (10.9)
		.485 (12.3)	(11.2)	(10.5)	(0.84)	(0.56)	.435 (11.0)
N Fine	1:160	.353* (8.97)	.332	.313	.025	.020	.322 (8.19)
		.366 (9.30)	(8.44)	(7.95)	(0.64)	(0.51)	.327 (8.31)

*Denotes preferred dimension



These four notes are primarily for 0 and On-3 gauges, but may be useful in other smaller scales (for dual gauge track).

1 Lay the turnout for 0 scale to S-3 Standards.

2 Add the On-3 only rail with an On-3 flangeway along it to S-3 Standards.

3 To make guard rails along the common running rail work for On-3, move the On-3 rail out by an amount equal to the difference in the flangeway widths that will maintain the On-3 check gauge.

4 Floor all common flangeways to the maximum depth of flanges used by 0 scale.

Scales larger than Proto 24 (1/2" = 1') are used primarily by live steamers who are well established in their respective sizes, each with its own formula for establishing wheel and track figures, thus they are not included here.

Table 12 NMRA Proto - Fine Scale - Wheels

NMRA Standards are the Primary System for interchange for standard gauge (4'8-1/2") in each scale. The narrow gauge (n3) Standards developed years later are built around closer to scale wheels and flangeways will be compatible with their standard gauge.

Scales large enough to use scale width wheels carry the designations 'Proto' with their scale ratio, while smaller scales using over-scale (but narrower than Standard) width wheels are designated as 'Fine'.

See related Track systems in RP-3.

Name or Scale	Scale to Foot	Check Gage (max) K	Back to Back (min) B	Tire Width (min) N	Flange Depth (max) D
Proto 24	.500"	2.265	2.188	.229	.063
		(57.5)	(55.6)	(5.82)	(1.60)
Proto 24n3	.500"	1.411	1.334	.229	.063
		(35.8)	(33.9)	(5.82)	(1.60)
Proto 32	.375"	1.699	1.641	.172	.047
		(43.2)	(41.7)	(4.37)	(1.19)
Proto 32n3	.375"	1.058	1.000	.172	.047
		(26.9)	(25.4)	(4.37)	(1.19)
Proto 48	.250"	1.132	1.093	.115	.031
		(28.8)	(27.8)	(2.91)	(0.79)
S Fine	.188"	.839	.800	.108	.030
		(21.3)	(20.3)	(2.74)	(0.76)
HO Fine	.138"	.613	.581	.086	.026
		(15.6)	(14.8)	(2.18)	(0.66)
TT Fine	.100"	.441	.415	.071	.022
		(11.2)	(10.5)	(1.80)	(0.56)
N Fine	.075"	.332	.314	.053	.020
		(8.44)	(7.98)	(1.35)	(0.51)

Notes

1 Notes 1-6 of NMRA Standard S-4 also apply here.

2 For Street Railway and Industrial Tram models where prototype flanges are narrower than 5-1/2". Wheel Tire Width Nmin may be reduced to twice the maximum Flangeway Fmax.

Scales larger than Proto 24 (1/2" = 1') are used primarily by live steamers who are well established in their respective sizes, each with its own formula for establishing wheel and track figures, thus they are not included here.

Table 9 (continued)

Notes

1 Truck BOLSTERS (S HI-RAIL only):

Low Bolster

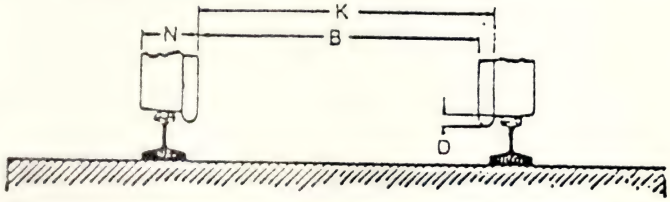
Freight car trucks 13/32"

Passenger car trucks 1/2"

High Bolster

All trucks 5/8"

2 Hi-Rail Wheels do not conform to the contours and dimensions of RP-25, so Flange Thickness T is listed above. Contours typically have no fillet radius between Flange and Thread and Flange tapers on one or both sides.



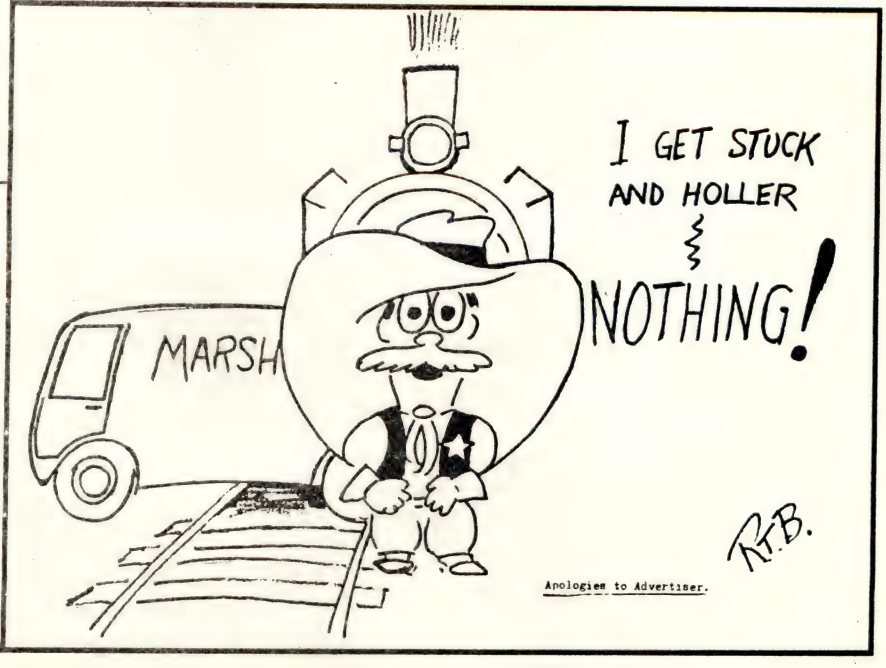
Styrene Scraps

by Ted Ward

The white plastic labels which nowadays come with punnets of plant seedlings are made from sheet styrene. Various samples on hand are each about 15 thou of an inch, 1/64th of an inch or 0.380 mm in thickness.

The ink on the seedling labels can be easily removed with unleaded petrol or white spirits, which is, incidentally, the solvent in brass metal polish. Don't shake the can before extracting a small sample on a piece of rag.

The samples referred to have been used to make the doors for five freelance refrigerator cars under construction for the author's Dingo Flats Railways.



Fitting BGM Delrin Wheel Bearing

by Alan Higgs

These bearings are packaged with about 60 bearings for $5.60 - $6, sufficient for 15 x four-wheel wagons. They improve the rolling characteristics of weighted BGM HO scale kits having polystyrene axle boxes to 'magic' quality. Incidently, I've found the straight kit rolling quality variable between BGM kits of different wagons; M& I wagons being better than U or T for instance, with graphite lubrication, providing a marked but transient improvement.

The bearings do not have 'top hat' flanges and may suit other applications.

Drilling the bearing holes in axle boxes before fixing solebars to floor is relatively straightforward, using the BGM bearing drill (Fig 1) or similar tool. Having a way of obtaining uniform depth holes is important. The drill does tend to 'walk' to one side as it bites, and this can produce out-of-square wheel sets after assembly.

Drilling the required holes to already assembled kits is difficult, but can be made easier with devices as in Figs 2 and 4. The drill can be held a constant height above the floor (using suitable spacer pieces) for all axle points and the drill is less prone to wonder. Hold the tool in one hand with thumb or a finger of the same hand maintaining back pressure on the axle box. Turn the knurled wheel with fingers of the other hand or with the hook tool which gives better purchase. I use the AMRA foam cradle to hold a wagon upside-down during this operation. It can be frustrating, and three hands sometimes would help, but patience and perseverance will win out.

Use a larger drill (about 1/8", 3.2 mm diameter), hand held, to give a chamfered entry to the bearing hole as suggested by BGM (Fig 3). This gives a guide to the bearing and, if sufficiently deep, also ensures the axle runs on the bearing, not the styrene. Check this point if the axle has sufficient end play, but still doesn't spin freely. The chamfer won't be truly square to the bearing hole on an already assembled kit, but this is less important.

Trial fit bearings to judge hole depth and wheel squareness. Only a small amount of end play is needed. An inconspicuous hole drilled in on an angle from the bottom front of the axle box can be used to help remove the bearing for adjustments.

If the axles are not properly parallel and square, enlarge the bearing hole(s) to be adjusted by applying pressure in the direction needed, while turning the drill. Cement a thin styrene packing piece (5 or 10 thou) in the gap side of the hole and ream the hole after the cement has fully cured. This technique can also be used if predrilled bearing holes are found to be not square after cementing sole bars to the floor.

BGM recommend changing to 25 mm axle lengths when bearings are fitted, but I forced the drill out of its sleeve a little more for deeper holes as the GY/U/T type axle boxes have enough meat to fit bearings with 26 mm axles. This does place more strain on the W-irons when fitting and removing wheel sets.

Axle boxes on I/IA, M, Short T, kits are too short to fit bearings with 26 mm axles

Continued page 44

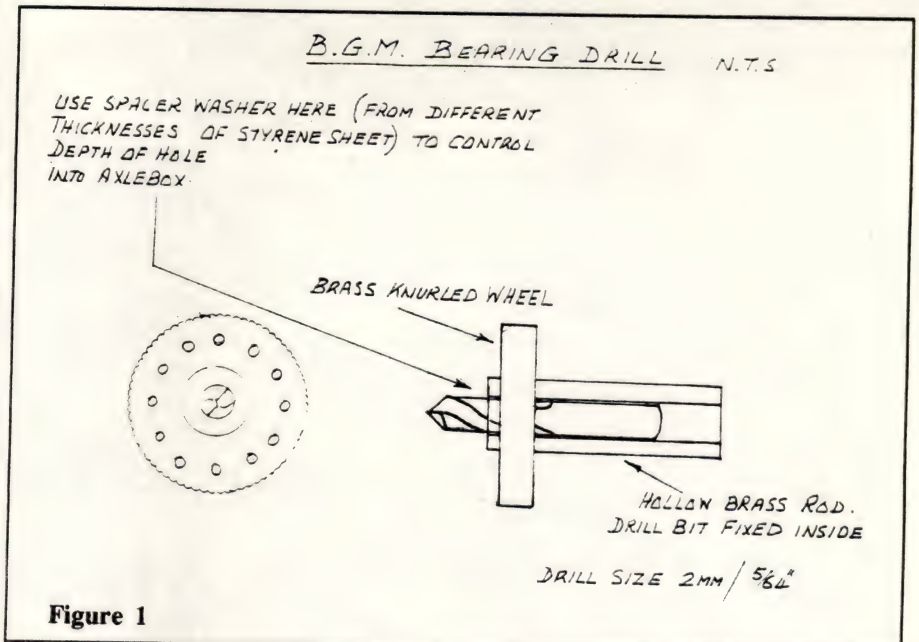


Figure 1

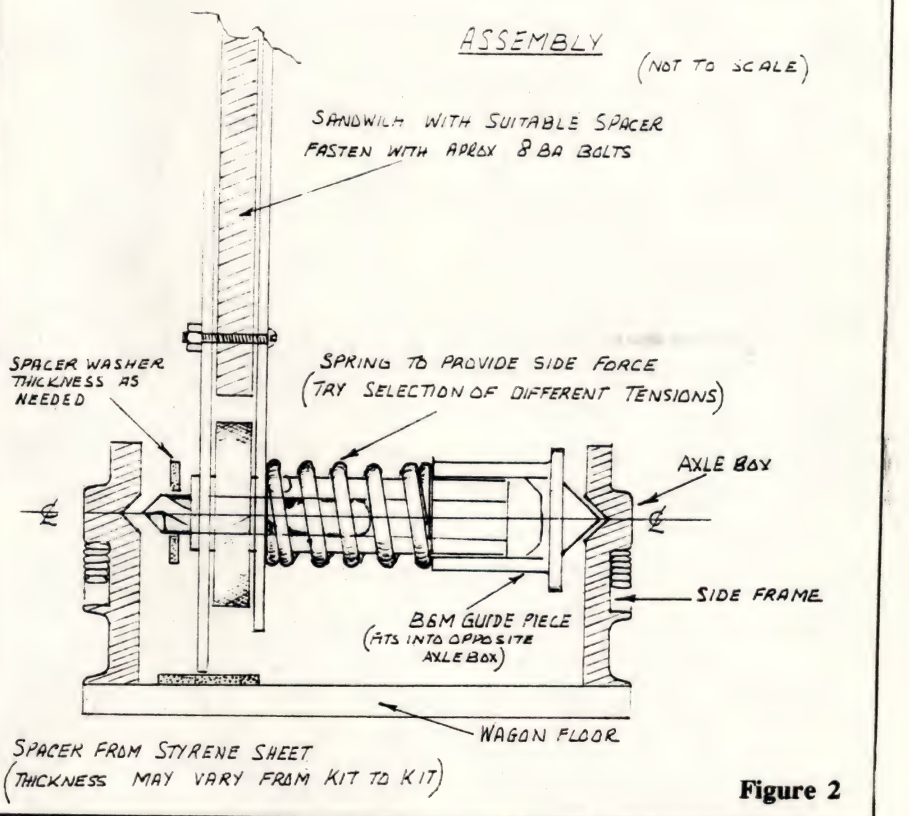


Figure 2

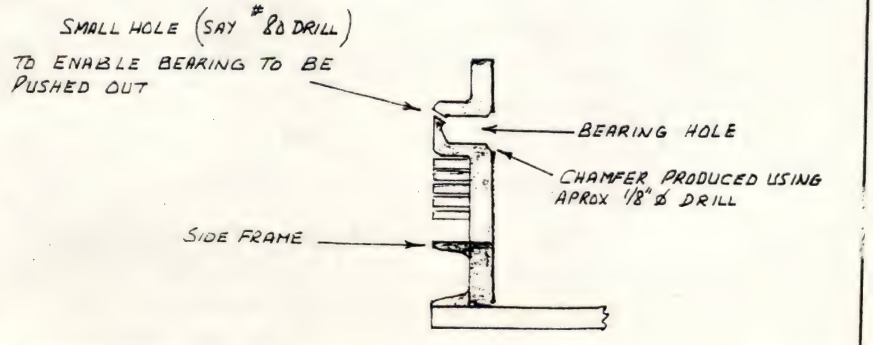


Figure 3

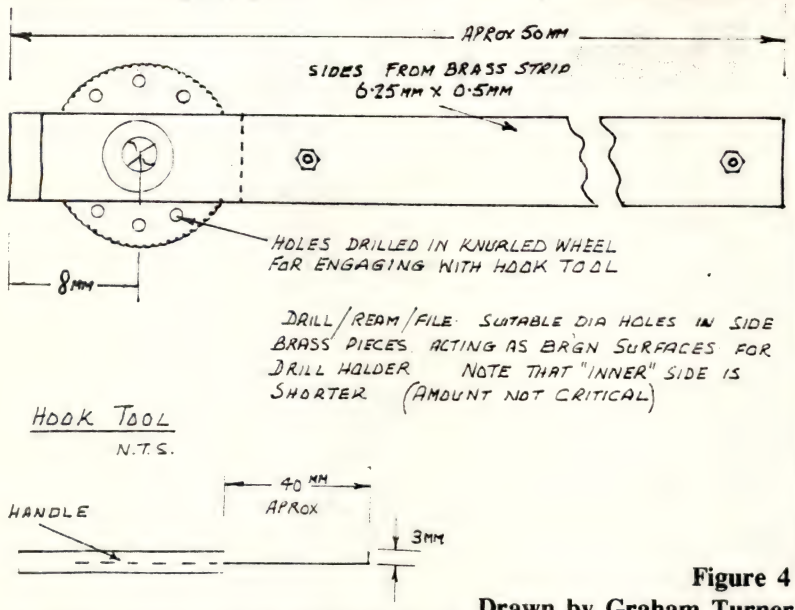


Figure 4
Drawn by Graham Turner

Continued from page 43

if assembled with the standard distance between solebars. I shortened my axles, rather than buy all new wheel sets, using a home-made jig to maintain the cone axle point. A lathe was not needed. wheel respacing is not difficult.

I don't glue the bearings into the axle boxes, but presume this can be done using epoxy or superglue, if desired. The 'removal' hole would help excess glue to escape.

Lastly, watch out for train run-aways when shunting on slight gradients!

PS If you ruin an axle box; don't despair. Try making a replacement from polystyrene sprue and cement in place after trimming off the ruined box. Make sure the cement has fully cured (24 hours) before attempting to redrill the bearing hole.

The difference between toy trains and model trains is not the quality of the items, but how they are operated.

RTB

It Occurs To Me

by R T Blodkin

7'0½" / 4'8½" = 1.49115

There are those in the model railway fraternity who are intrigued by 'what might have been'. These people are catered for by publication of diagrams and tables of dimensions in the various railway periodicals. Some folk, somewhere, manage to unearth prospective and suggested designs, some not much more than doodles, and attribute them to past locomotive engineers. To illustrate the point I would say that recently I came across an outline in a four-cylinder 0-8-0 tender freight engine, allegedly the work of Dugald Drummond of the L & SWR in England. The suggested engine certainly had several Drummond features about it, but a little thought soon gives the same away. The major fact arguing against it was that such a specimen to motive power was not necessary on that system. There just was not the goods traffic offering to make it worth while at the time.

Likewise, anyone who has read 'Bullied of the Southern' would, no doubt, recall the several proposed designs of steam locomotive detailed therein, one of which, as I remember, was an 0-6-4T for suburban work.

As we all know, Bullied was given a free hand in design and power to put such design into three dimensional reality quite late in life. Had he been given the opportunity several years (say 10) earlier, who knows what may have been seen galloping along the lines radiating from London south of that line from the Thames to the Bristol Channel. The diagrams, etc, in the book and a fertile imagination could provide no end of amusement, speculation and suggestion to the 'what might have been' fraternity. A few of the ideas would, I believe, make very attractive models.

So much for Bullied coming 10 years earlier. There is ample room for considering what effect juggling with time may have had on railways here and there. Most of the well-known CMEs would have produced a few surprises compared with the facts of established railway history.

There is one individual who did make his mark well and truly on the world of trains. Had he been on the scene 10 years earlier, I would be prepared to believe that railways as a whole would be vastly different today. That individual was Isambard Kingdom Brunel.

He was an engineer without parallel. We all know that this approach to the problems of the formative years of rail transport varied in many aspects from the generally accepted Stephensonian practices. Had Brunel been that decade in front of his actual arrival upon the scene and got into the business of creating a new system instead of George Stephenson it does not need much deep thought to picture what could have come to pass.

Think of a broad gauge Liverpool and Manchester Railway preceded by a 7' wide Rainhill Trials, won of course by a typical locomotive. Dare one say that railways in Britain would have been predominantly wider and that the 'Battle of the Gauges' (had it taken place) would have gone the other way. Instead of British Rail know-how being in the forefront of spreading 4'8-1/2" around the world as standard, perhaps 7'0-1/4" would be the global norm and basic track dimension. The mind boggles. Think of a North American 'Big Boy', 'Challenger' or Cab-forward on the big gauge. Even an AD60 Garrett would take some crediting!

Can you picture XPT, HST or TGV (in ascending order!!) scooting across the countryside on rails that much farther apart at goodness knows what speed? On the freight side, would container still be 8' wide, 8' or 8'6" tall and 20' or 40' long? Likely rather more I would say.

And what would be standing today where some of our magnificent railway structures presently are? The Forth Bridge is 100 years old now. Would it have been in anything like its given shape had it had to carry much larger trains of Brunellian concept. Sydarb's coat hanger was built to carry trains as part of its load.....!

Beyond the bounds, you say? Oh well, it just occurred to me!

For Sale

Brand new Trix HO scale three-rail Orient Express KPEV consisting of the following:

32219 Trix brown electric loco with pantograph

33390 Trix CIWL Sleeper, cream and brown under windows

33391 Trix CIWL Diner, with turned brass roof vents and table lamps which light up

Contact -
Ron Congdon
2 Burnett Street
EMBLETON WA 6062
Phone - 09 271 6945

For Sale

Complete HO gauge exhibition layout, 25' x 12' constructed to Modrail standards (with some modifications to the electrical standards). Comprising two triple units, four corner and two single unit modules plus loco depot with turntable module. The front module is a station complex and the rear module contains two ladder yards. Complete with power supply and control panels. Only needs buildings and rolling stock

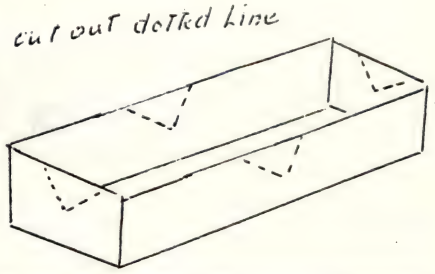
$1000.00 or near offer. Tenders close 30th April 1991 with Victorian Branch Secretary, John J Harry.

Helper

by Ron Congdon

I would like to pass on a little helper on the work bench which I find very helpful.

It is a little cardbaord box big enough to hold wagons or locos and small coaches upside down.



Aerial Photographs of the Prototype

by Ted Ward

The use of photographs as a modelling aid is, of course, part and parcel of modelling, and probably always has been. It is a moot point whether photography preceded the construction of the first model railway layout or not, but that is not the subject of this article. There have been countless thousands of photographs taken of prototype trains and models, and photography will always remain a part of modelling, remembering that a picture is worth a thousand words.

Prototype trains are usually viewed by modellers from ground level, and are usually photographed from that level too. The same goes for railway stations, buildings, yards and any relevant scenery, such as tunnel mouths, cuttings and bridges, etc. The prototype is almost always seen and photographed from good old ground level.

By contrast, model railways are planned, constructed, viewed and operated from a scale altitude which can be easily, if approximately calculated. If your model railway is operated from, say, about 3' above layout level, then multiply that figure by your scale ratio to give you your altitude. For example, operating 3' above a 1:87 HO layout is equivalent to flying over it at 261'. Metrically, 3' is about one metre and so your altitude is approximately 87 m. The same logic can be applied to all scales and ratios.

It is then, perhaps obvious that a great help towards accuracy in modelling would be photographs of terrain, railways and structures taken from altitude.

Every Australian state (certainly Queensland) probably offers aerial photographs and related products of all parts of its domain, and using the Queensland range as an example, available sizes range from 228 mm square contact prints right up to 1250 mm x 1000 mm enlargements, in black and white and in colour. Be advised that professional aerial photography isn't inexpensive, and don't expect to buy too many prints with small change. However, for accurate modelling of a particular favourite area, say a mountain range or even a station or workshop yard, a good aerial vertical or oblique shot will give information on the variation of ground colours or the variation or gradual alteration in, say, grasses or vegetation. An aerial photograph of a station or workshop yard will give an exact impression of how it should look from your 261 scale feet or 87 scale metres!

Information, including prices, on aerial photographs and related products are available in Queensland from -

The Surveyor-General
PO Box 40
WOOLLOONGABBA Qld 4102

Readers in other states should apply to their relevant equivalent office.

The Pop Valve

The Editor
AMRA Journal
Dear Rex

In his article in Journal No 200, Phil Kelly asks for any information concerning the rail lines running south from Cobar adjacent to Hillston Road.

In 1947 I was working as an audit clerk and one of my jobs was a company named New Occidental Gold Mines NL. I do not know the early history of the company, but understand it was formed in the 30s to work several mines located about four miles south of Cobar. I gained the impression that the lines were constructed before this. The operations ended in the early to mid 50s when the lode ran out, but early in its existence it had been very profitable.

Rail traffic in 1947 was tied to the mixed train which arrived in Cobar on Monday, Wednesday and Friday evenings and departed the following morning, plus an occasional goods train. I was not sufficiently interested in railways at that time to note engine types. The shunt to the mine was carried out in the evening. Traffic to the mine comprised mainly coal for their power station, together with chemicals (e.g. cyanide) and machinery parts, etc, lined with heavy paper to prevent corrosion. Being 1947, virtually all traffic was in S trucks. Unlike Great Cobar Mines, New Occidental did not have a smelter, the concentrates going (I think) to Port Kembla for treatment.

This does not give much of a history of the lines, but I am interested to read that the lines still exist, if only in an unused rusty condition.

Yours faithfully
Gordon Moore
New South Wales

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The Editor
AMRA Journal
Dear Rex

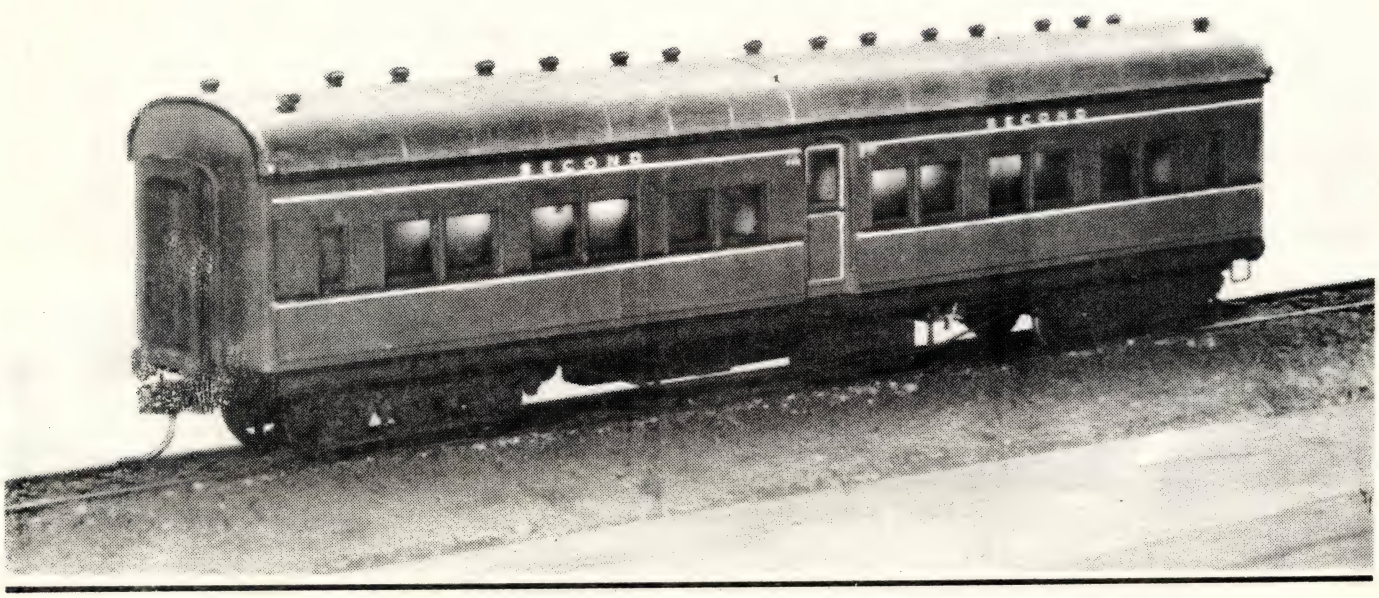
I must comment on Roger Lloyd's column in the 200th Journal where he raises the issue of how many national model railway associations are appropriate for Australia.

I endorse his suggestion wholeheartedly that one association only is needed.

I would like to see this become an active objective of AMRA. Hopefully there are enough mature members who can overcome parochial attitudes and objectively consider this issue.

Yours faithfully
Ken Cowen
Queensland

An entry in the Modelling Competitition at the 1990 NSW Exhibition at Liverpool. The model is of a NSWGR FG passenger car. Only six of these cars were built, converted from bogie horsebox underframes (BKG) in 1942 to relieve an acute shortage of passenger cars in the second world war. Does anyone know the builder of the model?
Photo Jack Parker



Queensland Railways New Training Layout

by Bob Mawson

Recently, I had the good fortune to be able to participate in part of the construction of Queensland Railways new Training Layout. The layout is to be used as a training aid to assist prospective drivers in all aspects of signalling and safe working practices likely to be found in the day to day operations of Queensland Railways.

The Training Program for drivers will be as follows:

Trainee Driver Instruction - 10 days at the School, Work Familiarisation Program, five days in the Depot. The Signalling Program will take seven days at the School. Safe working practices will be conducted over 15 days at the School.

Section Two of the Work Familiarisation will be conducted over the next five days in the Depot. Over the next 12 days, a course on Air Braking will be conducted in the School. Another 12 days will be spent in the School studying diesels. After diesels, 10 days will be spent in the school studying locomotive handling. Next, a third course will take on Work Familiarisation, this time lasting 20 days at the Depot. The next five days in the School will be spent studying the Theory of Train Handling, and finally, the next 100 days will be spent attached to a depot doing Practical Training Handling. The course runs for a total of 204 working days.

My participation was part of a joint effort by the members of the Queensland Branch of AMRA. Our part of the project was to lay out the track plan, lay the cork underlay and track, install the signals, construct various railway buildings to be found around the layout and finally, modify and paint the locomotives to be used on the layout. Apart from the locomotives, our part of the project had to be completed within six weeks. As you can see from the accompanying plan, the layout is extremely large. For this reason, the layout was constructed at Redbank Diesel Workshops in a secure building.

The layout has been built with HO gauge track work, but with the signals built to the larger 0 scale for enhanced visibility and clarification of signal details. There are 107 operating signals on the layout, comprising the following:

- Two, three and four aspect Normal Signals
- Two and three aspect Repeater Signals
- Four Aspect Route Signals
- Four Aspect with Station Aspect Indication Signals
- Trailable Point Indicators
- Position Light Signals
- Catch Point Dwarf Signals
- Several Semaphore Signals

In addition to the signals, there are Station Warning Beacons, Clearance Point Posts and various 'Enter' and 'Exit' Safe Working Boards.

Mr Mark Salisbury, from the Brisbane suburb of Sunnybank built the signals and boards, and he is to be congratulated on his exquisite workmanship.

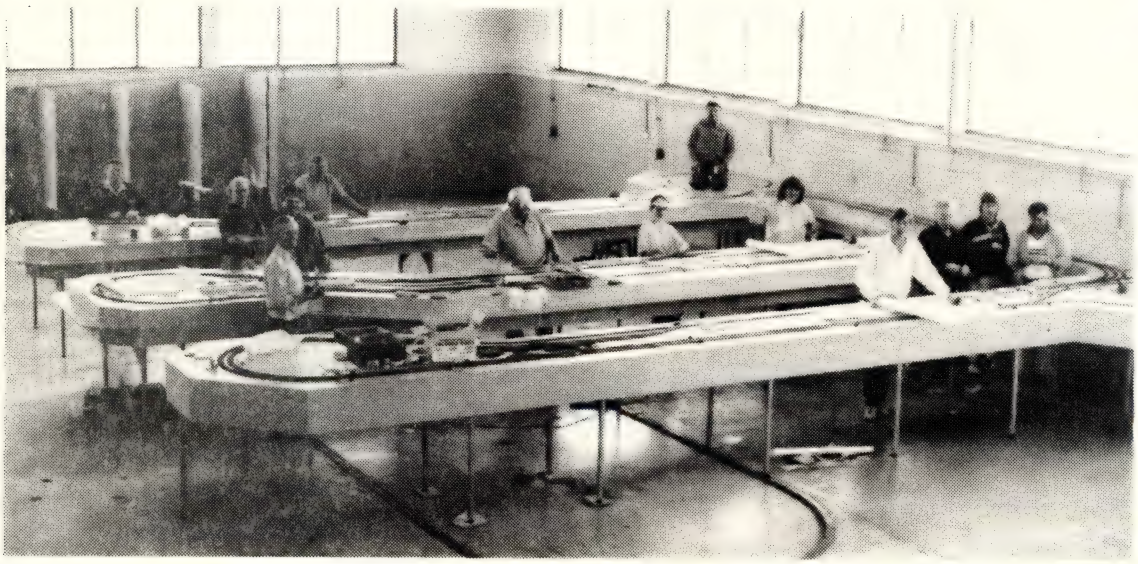
The baseboards and supports are built with timber and plywood, and the various sections are supported by a series of metal legs. To give the layout a neat professional finish, Laminex has been applied all over the baseboards and surrounding edges. This is the first time that I have seen Laminex used on a layout, and I must admit that the Laminex gives the layout a very neat finish and is very pleasing to the eye. The Laminex was selected for its ease of maintenance and cleanliness. There is no scenery on the layout, and all track is laid on a level plain surface. The lack of scenery can be attributed to the fact that the layout has to be moved from its point of manufacture at Redbank, just west of Brisbane, to its final home at the AR Driver Training School at Rockhampton, approximately 650 km north. The presence of scenery would hinder the movement of the layout and continually hamper cleaning operations. Ultimately, there is really no need for scenery on what is a serious training aid. For transportation, the layout can be reduced into nine sections.

The track, points and locomotives are all Marklin brand, and will be controlled by a Marklin Digital Computer. The Marklin Digital Computer was chosen because it can be interfaced with Queensland Railways own computer. Marklin K track has been used with a 3 mm cork underlay. The locomotives to be used in conjunction with the layout are Marklin's North American F7 type diesels. There will be eight of these locomotives for use on the layout. Four of the locomotives will be painted in Queensland Railway colours to represent the 1200 class. Two others will be modified with complete body rebuilds to represent shortened versions of the 1550 class and 2100 class locomotives, while the remaining two will be rebuilt to represent the 1720 class. At the time of writing, I believe that no decision has been made regarding the type of rolling stock to be used behind the locomotives.

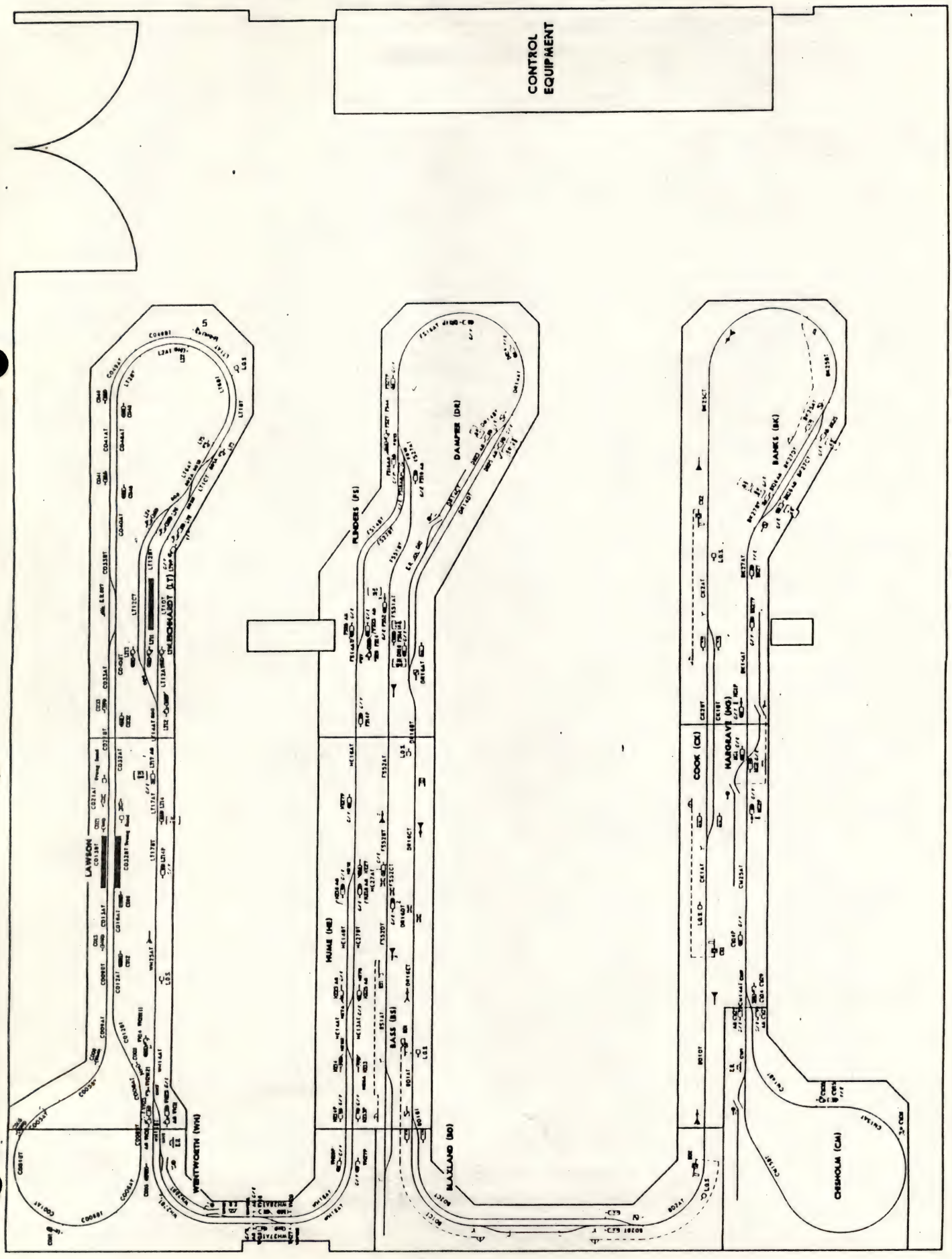
Localities and railway stations on the layout have been named after people associated with the discovery and early settlement of Australia. There are only two railway stations on the layout, one at Leichhardt, which represents an island platform, and one at Lawson, which has double platforms with a double track section running between the two platforms. Hardgrave represents a sugar tramway junction crossing the mainline, while Bass is a branchline terminus. Staff and ticket working will be used on the Bass Branch. Other types of safe working around the layout will include Train Order Working, CTC, Double Line Block and Double Line Bi-directional Movements.

On viewing the layout for the first time, one cannot help but be impressed, firstly by the size of the layout, and, secondly, by the concept behind the layout. I'm pretty sure that all of our members who took part in the project will agree that it was a very rewarding experience. An added bonus for those of our people who took part in the project was the opportunity to have a look at the work carried out at the Redbank Diesel Workshops on the various locomotives being serviced there.

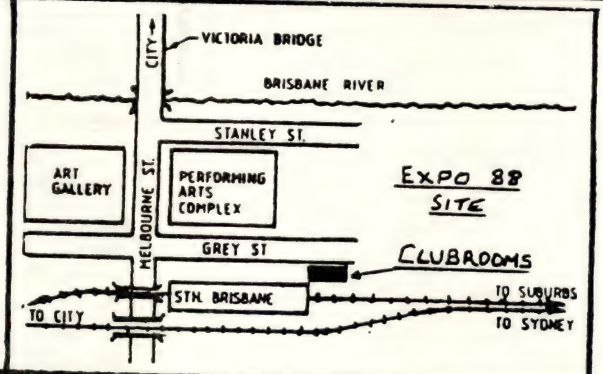
The project was completed within the time allowed, with Tony Weber and Steve Malone both going back to Redbank on several occasions to make minor adjustments. I believe that the Railway Department is very pleased with our involvement, and all who took part are to be congratulated, especially Tony and Steve for an excellent piece of work.



Thirteen AMRA members, plus a photographer at work on Queens-land Railways new Training Layout. In this panoramic view by Steve Malone, Tony Weber is at centre left with his arm upraised, while Debbie Malone waves to her photographer husband from centre right. At this stage of the layout's progress, the signals had not yet been installed.


CONTROL EQUIPMENT
LAWSON
BROKMAN (BT)
WENTWORTH (WN)
HUME (HE)
FLINDERS (FS)
BASS (BS)
DAMPIER (DR)
BLAXLAND (BD)
COOK (CK)
KINGSFORD (KG)
BANKS (BK)
CHISHOLM (CM)

STATE NEWS



THE GREEN BOARD

President's Piece

I'm pleased to report that the Xavier layout has been delivered to the Xavier Special School. The layout was enthusiastically received by the children and staff. I'm sure the children will get a great deal of pleasure from the layout. I would like to thank all those members who helped out on the layout, and a special thank you to Jim Fainges who designed and built the special cradle for the layout that allows for it to be stored on its side and moved about.

In future there will be no more working bees on the Club's property at Zillmere, other than possibly one working bee on the Exhibition equipment each year. We've got the grounds to such a state that one of us using the Club's ride-on lawn mower can cut the grass, plus do all the trimming in two hours. In future when repairs need to be done on the house, they will be done by outside trades people, after all we're a model railway club, not a real estate club. In the past we have always had the working bees on Club days, so by cutting out the working bees gives us that time to spend at the Club enjoying the hobby.

On 27 June we will be holding a photography competition. The competition is entitled - Your Favourite Print - only one entry per member, and the subject must be of a railway nature. Judging will be by the members present. Maximum size of the prints submitted will be 12" x 8".

Still on the subject of competitions, we will be holding a modular competition. Judging will be conducted on 23 January 1992, so there is plenty of time to work on your entry. Its been a long time since the last modular competition was held and if my memory serves me correctly, Arthur Hayes won it. I think its over 10 years since the last one. If this competition is successful, we will conduct the modular competition every two years in future. For more details, contact Tony Weber.

Now a few words on the Club layout.

We have now started work on the scenery, but at the request of the Layout Committee, NO scenery work is to be conducted without somebody from the Layout Committee present. This is to ensure that no mistakes are made and there is a continuity of the scenery from one area to another. Please abide by this request. The Layout Committee has the whole hearted support of the COM on this matter. If you would like to construct a building for the Club layout, see Tony Weber or Arthur Hayes for details. Remember the Layout Committee has the final word on the Club layout.

The May Model Railway Show looks like being a beauty. I'm pleased to report that we have had 63 applicants, plus another two after the closing date. Unfortunately, we have had to cut the number of exhibitors back to 52 due to changes within the halls and new Fire Brigade regulations. We have made enquiries regarding the availability of other halls within the general area that we use now, but none are available for the Labour Day weekend. With the large number of applicants, we had the opportunity to bring in some new layouts and ask some of the older ones to stand down. Some notable additions will be -

- Ken Walker's OO2-1/2 Indian layout;
- John Dresden's SMR from Sydney;
- Greg Langridge's Midland Region Brit ish Rail layout, and
- Stephen Russel-Clark's BR layout Am bridge.

This layout measures 8' x 1'6" and has been designed to educate the public that you can have an interesting layout in a small space. As well as the new layouts, there are several new traders, plus the layout competitions. Prizes will be awarded for the Best Popular Layout, Best Australian Layout and Best Non-Australian Layout, as well as the Stephen Suggit Modelling Competition.

Don't forget, Queensland members we need your help, so contact Jim Christie, Tony Weber or myself and we'll let your know how you can help us out, after all it's the Model Railway Show that finances YOUR activities within the Club.

Just before I sign off, I would like to thank Jim Bilby for painting the interior of the house in January. We agreed to pay Jim to do the job, but when it came time for payment, Jim declined to accept payment for his work. Jim's final word on the subject was 'it was his contribution to the Club'. Once again Jim, our sincere thanks for a job well done.

Until next time, good modelling and hopefully see you at the Show.

Bob Mawson

Caloundra and District Model Railway Association Visits AMRA Queensland

One of the more significant aspects of railway modelling, particularly to people like AMRA members who have declared their amiability towards fellow modellers by joining an association of modellers like AMRA, is inter-club visits. The opportunity to meet and welcome fellow modellers is a means of deepening and strengthening the comradeship which should exist between like-minded souls, and it is probably not often enough that some clubs and even branches welcome other club members to their doors.

The Queensland Branch at South Brisbane was privileged on 16 February to welcome the President, committee members and members of the Caloundra and District Model Railway Association to its clubroom for a very pleasant Saturday afternoon which was enjoyed by all who attended.

About 10 members of the Caloundra Association, with President Mr Murray Easton, furthered their club policy of visiting other clubs to help foster kinship between clubs and to exchange ideas. The week after visiting AMRA Queensland will see this active group travel about 200 km south from Caloundra to Surfer's Paradise to visit two more layouts, that of Mr Ken Leach, who has a large Southern Pacific RR layout and another Gold Coast layout.

During the visit to South Brisbane, Caloundra President Murray Easton advised that the club is currently developing a layout based on a 'flexible module system', and comparisons are being made between the various systems used by other clubs with a view to determining which system is deemed most suitable for Caloundra.

Ted Ward

Program

APRIL

25 Thur — The Law and You
A talk by Bob Clelland

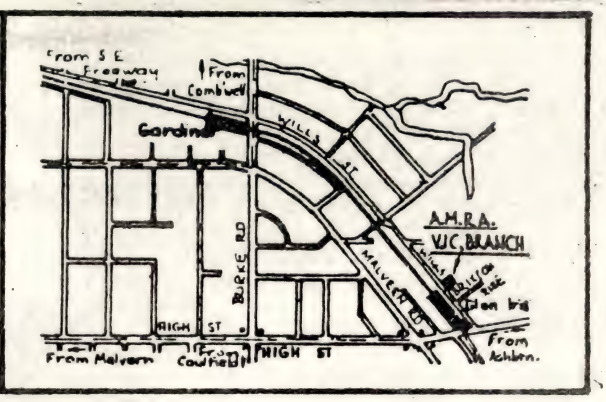
MAY

24 Thur — Model Railway Show post mortem
Your chance to voice your opinion on the Show

JUNE

27 Thur — Photography Competition
One entry per member
Maximum size - 12" x 8"
Subject must be of a railway nature

The 1st Saturday and 2nd Thursday of each month is layout construction activities.



Victorian Branch Notes

January Meeting

There was no official meeting, the Clubrooms being open for members to run their trains on the layout and to generally socialise.

February Meeting

Models for Display

P England - 311 off UK private owner wagons

M Martin - 8 off BR 47 class DE locos in various liveries (7 being Lima and 1 Hornby)

K Elder - old style computer relays for logic circuits (donated to Branch)

Competitions

Model

R Luke - JHG guards van - 90 points

Photo - pre Tangerine VR train (no fan trips)

Print

B Race - at Kilmore East - 69 points

Slide

S Westerman - at Heathcote Junction - 84 points

Syllabus Topic

Consisted of a 'Show and Tell' of members' models.

Mark Martin - Scot Rail prototype of the Edinburgh to Glasgow train consisting of a Lima loco (47/7 class) and six Lima/Airfix coaches (the driving trailer being a modified Airfix, the rest Lima) in push-pull mode.

John Gardner - BGM VR S class Pacific steam loco with three Roco coaches and BGB kit BVY van (coaches fitted with close couplings).

Bill Morehouse - BGM VR D3 steam loco with BGM AW/BW carriages and C van (two Hornby, two vans together).

Roger Lloyd - Scratchbuilt (with Tyco Mechack mechanism) NSWGR 57 class steam loco with 11 coaches (Lima, Trax and Powerline).

Bruce Race - NSW Limestone Train (NHL Goulburn to Port Kembla) consisting of two off 44 class DE locos (Lima bodies with double brass mechanisms (four-pole motors) by Loncor Hobbies), a number of Mini models CHS 100 ton wagons (with real limestone as load) and a JHG van (Stephen Johnson kit).

Alex Miller - Brang Volkswagon motor van on rails of the German Federal Railways.

Trevor Reeves - VR Deepdene Dasher consisting of BGM E class steam loco and two Roundhouse kit (overland series converted) coaches.

Bob Dunn - BGM Stephenson A2 886
BGM Walchaert A2
BGM AW and BW, AE and BE and BCE coaches

General News

Club Jackets and T-shirts, etc, orders to S Westerman by September 1991 meeting. As an indication of price, the recent order for such received at the February 1991 meeting was $38 for a jacket and $23 for a T-shirt.

Working Bee

The next working bee to be held on Saturday and Sunday, 18 and 19 May 1991.

Work Nights

These are held on Tuesday nights (except public holidays and Christmas/New Year) from 7.45 pm at the Clubrooms. Members are welcome to come along and see whether there is some aspect of modelling for which they would like to offer their services.

During 1990, the following members attended:

R Marsden (41 occasions), R Lloyd (40), D Marsden (38), A Woods (29), G Stockfeld (28), W Secker (27), G Nitz (22), T Shenton (20), P England (18), R Dall (13), L Johnstone (11), D Norman (10), R Polestena (9), J McDonald (8), M Rheumer (6), O Ely (5), A McKenna (5), I McKenna (5), R Thomas (3), B Wadge (3), M Ebinger (2), G Turner (2), S Marsden, E Secker, W Morehouse, R Bogie, M Prescott, M Lloyd, D Richards (1 each)

Annual Auction

This year this will be held on Saturday afternoon 15 June 1991, commencing as soon after 1.30 pm as possible. It is requested that lots be in by 1 pm.

Running Days

During 1991 these will be held as follows:

Sundays afternoons - 19 May, 11 August and 17 November between 1.30 and 5 pm

Weekday Working Bee

These are held on the first and third Monday mornings of the month (except public holidays). The following members have earned a special thank you for the extra efforts for 1990:

J Treseder, B Southwell, J Kerr, A Johnson, N Hambly and G Turner

Victorian Branch Notes

Members desirous of having information, etc, included in the Victorian Branch notes please refer to Victorian Branch Sub-editor (R Marsden). Note that such information has to reach the sub-editor by the middle of the even month for inclusion in the next Journal due out at the end of the odd month.

Program

APRIL

6 Sat Junior Day - 10 am - 3 pm - BYO train

7 Sun Timetable Operation - 1.30 - 5 pm UK prototype

8 Mon Weekday working bee and operation 10 am - 3 pm - BYO train

11 Thur Social Meeting - Guest Speaker - 7.30 pm
Model - Australian or other kit
Photo - Catch point or derail

13 Sat Ladies night - 7.30 pm - Venue to be announced

15 Mon Weekday working bee and running 10 am to 3 pm - BYO train

25 Thur Timetable operation - 7.30 - 11 pm Australian prototype

MAY

4 Sat Junior Day - 10 am - 3 pm - BYO train

5 Sun Timetable operation - 1.30 - 5.30 pm Australian prototype

6 Mon Weekday working bee and operation 10 am - 3 pm - BYO train

9 Thur Social Meeting - ARHS Film Night - 7.30 pm
Model - Open Standard Categories
Photo - VR J Class Loco

18 Sat Working bee - 9 am

19 Sun Working bee - 9 am

19 Sun Running Day - 1.30 - 5 pm - BYO train

20 Mon Weekday working bee and running 10 am - 3 pm - BYO train

23 Thur Timetable operation - 7.30 - 11.30 pm USA 1970/91 prototype

30 Thur Clinics - 7.30 pm
Topics to be advised

JUNE

1 Sat Junior Day - 10 am - 3 pm - BYO train

2 Sun Timetable operation - 1.30 - 5.30 pm USA prototype

3 Mon Weekday working bee and operation 10 am - 3 pm - BYO train

13 Thur Social Meeting - Clinics - 7.30 pm
Model - Australian or other kit
Photo - Climax type locomotive

15 Sat Annual auction - 1.30 pm
Lots to be in by 1 pm

17 Mon Weekday working bee and running 10 am - 3 pm - BYO train

27 Thur Timetable operation - 7.30 - 11.30 pm USA Western Lines 1950/60

Library Notes

You may remember that this column in the last *Journal* was devoted entirely to books about the prototype, all but one being lush picture books. Things are very different this time around. The modelling books include some superb productions, while

those on the real world are generally pretty low-key, if worthy.

An exception is in fact by a member of this Branch, Russell Edwards, is called *Spirit of Rails* and published by Edwardian Enterprises (which one assumes is a very long-established family business). It is a collection of superbly detailed shots of trains, every one taken three quarter on, which means they are to all intents, photos of locomotives, with their trains disappearing into the distance. Not into a haze; the depth of field is remarkable. Almost any page would make a beautiful calendar shot, or win a prize at a Club meeting. Sadly, when bound together, without any other type of shots for relief, they do tend to boredom.

As record shots, or aids for modellers, they would be excellent, except that their brief captions, while mentioning the locations, give no dates at all. Come to that, the book itself has no publication date, which will annoy any future historian wishing to use it to establish dates for (say) changes of livery.

Having said all that, it's a good collection, and Russell deserves congratulations.

Another is by an erstwhile member of the Branch, Ken Stone. His *Electronics for Model Railways* was eagerly grabbed when it came out in 1984, as providing simple, straightforward instructions for building useful things. Even the semi-electronic-literate could make things that worked. And there was the *Talking Electronics* series to provide the beginner with enough information to make it possible. And they supplied kits of parts and the all-important printed circuit boards. Book 2 of the title has now been published, at the ridiculously low prices of $3.80 (again by *Talking Electronics*). Projects include a flasher for level crossing lights, delay circuits, a PWM throttle and as they say, many, many more, with a chapter on optical fibres and one on trees thrown in. Not quite in the 'things one must have' category, as was the first volume, but well worth buying to put beside it. Don't have Book 1? Well, you can always borrow it from the Library. The kits, at any rate, are still available.

Model Railroader must have more material than it can print. Heavy sighs from other editors. Anyway, they have just started an annual series called *Great Model Railroads*, and the first volume is just to hand. Reminiscent of MR in format, but with rather longer layout articles, as you would expect, and only one or two of the other regular features. Not all the layouts are big, which provides a change, but all are to a greater or lesser extent, mouth-watering. You'll enjoy it.

Simple Model Railway layouts by T J Booth takes a number of frequently built layouts - branch line, American 'short line', narrow gauge quarry, etc - and deals with each in some detail. On the way, all sorts of modelling tips are given. Each section is more or less self-contained, so there is a lot of repetition, but equally it is worth straying into a section other than the one of your own interest for the tips and wrinkles. Aimed at the relative newcomer to the game it still is easy and useful reading for the experienced.

Now to four excellent little books published by Wild Swan Publications, who put out that wonderful periodical *Model Railway Journal*. A4 on heavy white paper, they are a delight to look at, with a discreet use of colour on the covers, and black and white photos and lots of useful line sketches inside.

An Approach to Layout Design by Iain Rice starts with the concept of a layout as a theatrical performance and, while including the nuts and bolts of construction, still keeps visual design firmly in the front of the mind. he gives a number of carefully evaluated examples, some of which have been built, many represented only by his beautifully detailed sketches. It's a surprisingly long read, perhaps partly because with every paragraph one is made to stop and rethink.

Also by Iain Rice is *Plastic Structure Kits*, based largely on Wills Scenic Series (Rice is a long-time associate of Wills). He takes the reader from the siting (back to layout design again), through assembly techniques, to superdetailing and finishing. All through there is the emphasis on observation of reality: the kits are material for producing the illusion of reality; they are not, by themselves, that reality. Builders with any kits, not just Wills', will enjoy and benefit from the book.

The Pendon Museum has a place of its own for its modelling in minutest detail the buildings of a farming community earlier this century. One of those involved, Chris Pilton, has produced *Cottage Modelling for Pendon,* in which he discusses techniques, aims and details. Most of us won't be wanting to model thatch-roofed cottages and pubs, but we all could learn useful ways of doing our own things. We are most unlikely to devote 200 hours to the building of a cottage!

And for something completely different, Dave Rowe's Industrial and Mechanised Modelling with its meticulously detailed visuals, and the fun and ingenuity he's used to bring them to life. It's rare to see movement in our layouts, but as he says, why should the trains be the only things that move. The book brings out that fun, and, with luck, will spark off the spirit of invention in some of us.

Back to the prototype: *Steam Days on the North Coast of NSW* is by Richard Butcher, a tradesman for many years at the casino 'loco' and the book is a mixture of history of the line and especially of the depot and personal reminiscence. Pleasantly written, very informative and from rather a different angle, it's a very good read.

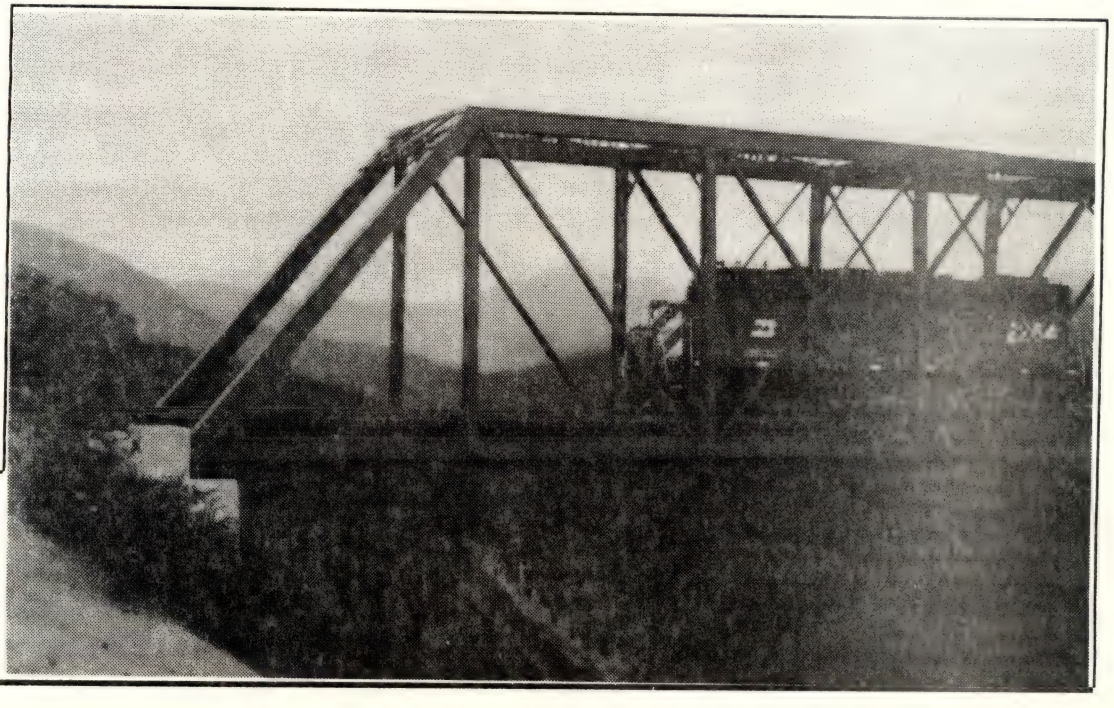
That can't be said of *Sydney's Wooden Electrics* by Michael Kerry, nor is it intended. The book is a tabulation of all the cars, built in 1914-16 and 1920-21, detailing their life cycle until (usually) scrapping. useful rather than exciting, but with a pleasantly designed cover.

Still NSW (or was it?) is Steve McNicol's (Railmac) *Locomotives of the Silverton Tramway*. Again largely a listing of the Broken Hill locos, but with some descriptive material as well.

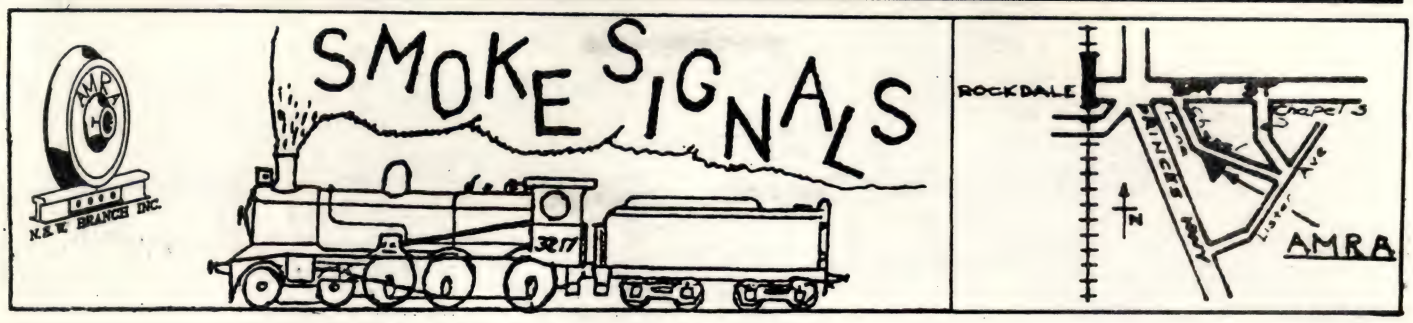
South Australian Diesel Pictorial was a worthy publication in 1981, put out by the Mile End Railway Museum. Much has happened since then, most obviously the Australian National takeover and the Museum's move from Mile End to Port Dock Station. They have now published *South Australian diesel Pictorial: the 80s*, hundreds of clear photos, very many in colour, with brief, but useful captions. A nice A4 format, with a spectacular limp cover.

Victoria hasn't been forgotten. The indefatigable Marc Fiddian has produced *Victorian Railway Mishaps*, a singularly mild word for the general devastation it records. Accidents of various kinds, from 1855 to 1989 are recorded, mostly with illustrations. I must admit a macabre fascination with these horrors; like-minded readers will thoroughly enjoy the book, revelling (of course) in the narrow escapes; serious modellers will welcome the chance to see what the undersides of rolling stock really look like.

Brian Southwell
Librarian



A train crossing the Central Valley Pratt Truss bridge on the branch line on the Victorian Branch layout. Photo Tim Shenton



New South Wales Branch Notes

Welcome to New South Wales Branch's 34th year.

Firstly, the Annual General Meeting was held on Saturday 2 February 1991, with an encouraging 43 members, compared with 32 members last February. This demonstrates the growing interest and dedication to AMRA policies and management. Keep up the good work. Your input and ideas are necessary to keep the Club going.

Now on with business.

The elected Management for 1991 is as follows:

President - Phil Kelly (unopposed)
Vice President - Fred Green (unopposed)
Secretary - David Bennett (unopposed)
Treasurer - Jack Parker (unopposed)
Exhibition Manager - Bob Wardrop (unopposed)
Committeeman - Alan Tonks
Auxiliary positions are as follows:
Branch Reporter - Craig Withers
Librarian - Arthur Hall
Librarian Assistant - Craig Withers
Exhibition Manager's Assistant - Roy Baxter
Exhibition Roster Clerk - Phil Lee
Exhibition Roster Clerk's Assistant - Alan Tonks

With this kind of talent, how can we go wrong?

Well, on with other happenings.

The NSW HO Prototype Operating Group (NSWHOPOG) to be known as 'POG', has been granted permission to continue their monthly meetings using the NSW Branch's Club layout and facilities. So far they have put together $60 in revenue which is to be used to upgrade the HO layout. Eventually they hope to have automatic uncoupling systems installed on the layout.

General Business

The contactor and battery for the emergency lighting at our Clubrooms is now, as I write, in the process of being installed. The lights are now in position, and after a 'dry run', proved to be fully operational. On the layout scene (while we are here), an abattoir is being constructed by yours truly, and it is coming along well, even if a bit behind schedule.

New Members

NSW Branch has gained some 10 new members which brings our total membership up to 256 as against 249 for this time last year. Welcome!

Lastly, I am sure I speak for all 'old' members in wishing them an exciting time in model railways, and I wish everyone a happy modelling new year.

Your Branch Reporter

Craig Withers

Program

APRIL

6 Sat Layout operation
12 Fri Clinic - detailing wagons
20 Sat Modelling Competition
26 Fri Layout operation

MAY

4 Sat Layout operation
10 Fri Clinic - scenic modelling
18 Sat Open Day
24 Fri Layout operation

JUNE

1 Sat Auction
14 Fri Slide night - C Gilbertson
15 Sat Layout operation
28 Fri Layout operation

Meetings at Clubrooms, Chapel Lane, Rockdale, are held on the -

. 1st and 3rd Saturdays

and

. 2nd and 4th Fridays

Unless otherwise specified, meeting times are as follows:

. Fridays 7.30 - 11 pm
. Saturdays 2 - 5.30 pm

Auctions: Goods for sale to be booked in by 2 pm.

NOTE:

AMRA (NSW) Clubroom telephone number is - 567 1899.

All correspondence regarding NSW Branch matters should be addressed to -

The Secretary
PO Box 194
ROCKDALE NSW 2216

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N Scale Report

or

Physiological Profile on a Growing Layout

I have examined the patient thoroughly and in my professional opinion, the patient is progressing as to be expected, and is at a stage of growth befitting its age of about four years.

I am aware that in its gestation there were some problems retarding development, especially in the *parametus main hallus,* but this soon recovered and now in fact distends beyond expected dimensions by about 50 mm or so.

The skeleton is strongly developed and should serve the patient well through its expected lifetime. Its legs are sturdy, and show no signs of weakness.

I understand that a number of specialists are treating certain anomalies in the makeup of the specimen. Although the area just adjacent to the mouth of the *loop non visiblus* has been attended to and is due for final structural grafting, the rest of the tissue shaping the body is still exposed and vulnerable, and priority is being given to short term measures of plaster bandage. The two Doctors Watson, both Senior and Junior, are endeavouring with special saw and rasp to achieve that firmness of shape and variety of texture which so interests the general public in large specimens such as this.

Currently the noted and venerable Professor Bennett is concluding his checks of the nervous system, ensuring through exhaustive trace methods that the electrical impulses governing movements and motor co-ordination are without fault.

I enquired of the good surgeon Bennett as to whether all signals were go and I admit to a certain lack of comprehension when he told me 'of course not, if they were all go, nothing would work'.

Connected with this work are the diagnostic labours of respected brain surgeon the Hon John Lischeld. In all my veterinary experience I have not encountered a man more capable of explaining something as obviously complicated as the logic in the brain of the patient, and yet being able to understand it himself when no-one else around him does. A truly remarkable fellow.

Assisting him is the young Doctor Cooper, who shows every sign of competence and forethought as he tackles the practical application of Dr Lischeld's theories.

All in all, I can only say that the patient is progressing well and will be fully mature in about two years. There is no reason not to expect a full and rewarding lifespan.

Dr Victor Frankenstein

PS In addition to the good doctor's assessment, I would like to correct an anomaly in the January/February report - being the mention of the chicken wire and papier mache scenery on the peninsula. One recent Monday night during our absence, vandals broke into the Clubrooms and erected a substantial plywood structure at the end of peninsula for the scenery. The following Monday, of course, much of this had to be dismantled and replaced with a far lesser bulk of polystyrene. The culprits have now been apprehended and warned against this type of crime.

Glenn Watson
N Scale Supervisor

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Exhibition Report

The 1990 Sydney Model Railway Exhibition was again held at the E G Whitlam Recreation Centre, Liverpool, on the holiday weekend, 29 September to 1 October 1990.

There were a total of 71 stands; 43 non-commercial, 4 semi-commercial and 24 commercial, as well as the take-away food bar, the nibble bar, the information stand and exhibitors' food area. A total of 37

operating layouts were on display.

Despite four exhibitors withdrawing within weeks of the exhibition due to various reasons after the hall layout had been finalised and all acceptances posted, the spaces occupied by all except one layout were filled before the exhibition.

Unfortunately that layout was the largest single exhibit and was an island layout. This space was partially occupied by the placement of chairs for the use of the public, and while much appreciated, this still left a somewhat vacant looking area.

The absence of Norm Read and Col Shepherd's 0 gauge layout left a large area to be filled and was commented on by several visitors.

I would thank all those members and their friends who helped to arrange and run the exhibition. A special word of appreciation must go to Phil Lee, the roster clerk, Norm Read and the others who laid out the hall, and to the ladies for their untiring efforts in the catering areas, as well as Corinne Bunker, her family and friends in the Nibble Bar.

Val Hogan, Denice Tyson and Shirley Hetherington did a grand job in organising the food bar, while June Larmour was always there to back them up in whatever way she could. Over 300 catered meals and 700 snack meals were served this year, as well as uncounted cups of tea and coffee.

This year's non-commercial exhibits included Alyn Vale from Brisbane, Thornbury Branch from ACT and Lakesyde, Cockroach Creek and Farndale Road from Newcastle.

Interstate visitors this year included Les and Kerry Hayes from Brisbane; Rex Little, Jack and Dot Treseder from Melbourne and Bruce Norton from Albany WA. Nineteen members of the Corio Model Railway Club from Geelong were also made welcome.

The attendance this year was a little worse than last year and it seems that the changes to the school holidays have been detrimental to both the number of AMRA volunteers and the public attending the exhibition.

Three Eight O One Ltd (3801) attended this year for the first time and went to a great deal of trouble to prepare their excellent stand in the shape of part of a railway carriage.

Roger Cantwell's Theatrette was very popular and at times was crowded. The Mid West Rail Museum also exhibited for the first time and their restored 'trike' was very popular.

The Sydney Society of Model Engineers had, as well as their static display inside the hall, an operating 7-1/4" gauge live steam system in front of the Centre and provided much enjoyment for many children and parents alike.

The winners of the various awards and prizes were as follows:

Best Australian Prototype Layout (Private)

Alyn Vale, Stand 45, owned by P Gibson, B Thomas and R Smith

Best Australian Prototype Layout (Club)

East Matelend, Stand 67, exhibited by Epping Model Railway Club

Best Trade Exhibit

Toyman Imports, Stand 50

Highly Commended

'Richmond', Stand 54, exhibited by Mick Lovell.

Best Foreign Prototype Layout

'Thornbury Branch', Stand 69, exhibited by Graeme Clancy representing BRMA

Best Layout

Alyn Vale, Stand 45, owned by P Gibson, B Thomas and R Smith

Best Entry Modelling Competition

Mick O'Hanlon

Most Popular Layout

Cockroach Creek Stand 57, exhibited by Keith King

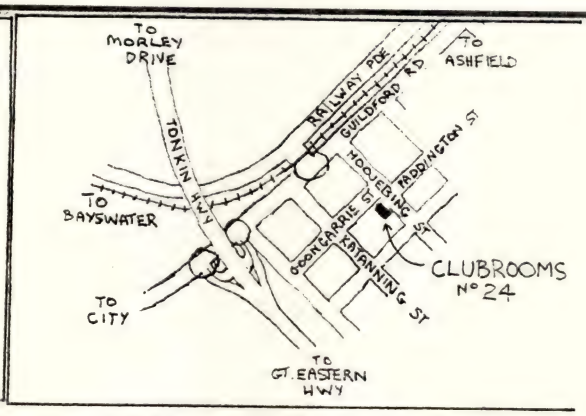
The first 10 layouts in order of popularity were as follows:

1 Cockroach Creek
2 East Matelend
3 'Nebroc' Railways
4 Alyn Vale
5 Hawkesbury
6 Yaston
7 Northyard
8 Garden Railway
9 Sandy Lagoon
10 Bradney's group of layouts

It is noteworthy that although all exhibitors were asked to advise how many leaflets they could distribute in their local area, only one exhibitor replied.

Finally, a word of appreciation to my wife Dulcie for her help and patience in the months leading up to the exhibition. Dulcie has done all the typing and without her help I could not have managed.

Bob Wardrop
Exhibition Manager



Extracts from 'The Branchline'

Simon's Scribblings

The Branchline Editor has taken me 'up-market' in this issue with a headline like that! He pointed out that since I adopted the 'title' of President's Piece for my bi-monthly comments for The Branchline, he's noted that all Branches of AMRA are using this term in the State News section of each issue of Journal. So, in the best Western Australian tradition, I'm going to be different to everyone else and come up each issue with my 'scribblings'!

Well, where do we start? Probably, 21 December last...when over 25 members turned out with their wives and children for the Branch's Christmas Wind-up. They gathered and all sat down to their BBQ meal in the main meeting room, making it a rather cosy affair all round. Those patient, tolerant and forebearing ladies, who had put up with their spouses' dedication to AMRA throughout 1990, were rewarded with the surprise presentation to them all of a bouquet of flowers and a box of chocolates. I did hear many of the ladies remarking about how bad chocolates are for waistline control and I did notice how many of the boxes of chocolates had been pirated away by the respective husbands! A good time was had by all - a pity that so many members did not turn up.

Came the New Year and your Management Committee got down to looking at the report that I had prepared on what had been said on 21 October last by those members who had attended the 'Have Your Say' meeting on that night. Many points had been raised at that meeting and your Committee had made a 'first pass' at them.

One comment made at the 'Have Your Say' (and heard previously too) was that the Branch should have a facility, over and above the Auctions, for the sale of members' unwanted model railway equipment. The request has been acted upon with the creation of 'Moojebing Market'. This, too, is covered in more detail elsewhere in this issue and I hope that those members who have requested it will use the facility - as well as many other members as well.

Perhaps the main event in the past two months has been the most generous offer made by members Tony Gray and Len Hughes - the offer to donate to the Branch the baseboards and trackwork of 16 modules of the 'West-N-Trak' N scale layout. Their offer has been gratefully accepted by the Management Committee and the 16 modules have been delivered to the Clubrooms and as many as can be accommodated initially have been erected and electrically checked out - to the extent that much of the Branch's N scale stock was brought out of its boxes within seven days and was run around the Branch's newest layout.

Thank you very much, Tony and Len - it's now up to the members to make full use of this new layout and to put in a bit of effort into whatever development is planned for it.

After that, the next main event over the past two months was 'The Evening with Jack Kine' on 4 February. Jack Kine is a

master of the art and the science of creating scenic (and special) effects, this being developed during his 40 years with the BBC in its television Special Effects Department. In his retirement, this skill was applied in the development of techniques and materials suitable for railway modelling. Although we tried to keep him on this subject, his skill as a raconteur was dominant and he held the largest turnout of members we've ever had (over 60) completely spellbound as he related incident after incident in his days with the BBC. Two of our members recorded the complete evening with their video cameras and I understand that they are currently working on the possibility of producing a 75-minute videotape of the evening's proceedings, using the two camera angles to provide variety. More on this in the near future. My thanks to Ron Fryer for telling me that he had heard Jack being interviewed on 6WF on 18 January and to Alan Porter who, like Sherlock Holmes, followed a trail from the ABC to Jack's daughter (with whom he is staying) at Glen Forrest.

As Garry Pilmoor points out elsewhere in this issue, the 1991 Model Railway Exhibition must be a financial success and to assist this end, I shall be sending you all a letter in the next issue of The Branchline asking for your support by promoting the Exhibition, by offering to help with running it and by selling, if you have no hang-ups, a few raffle tickets. Remember, it's your Branch and your Clubrooms as much as mine.

That's probably enough from me for now. Until the next time.....

Simon Mead
President

The 1991 Model Railway Exhibition

Eighteen layouts, at the last count, are lined up for the 1991 Model Railway Exhibition to be held in the Silver Jubilee Pavilion at the Claremont Showgrounds over the weekend of Saturday 1 June to Monday 3 June. Some are completed (or nearly so) and 'ready to go' while others are a bit less ready and will (hopefully) be finished off in the 14 weeks remaining. Looks like it'll be a great Exhibition.

The cost to the Branch of putting the Exhibition in place will be some $15 700, about $5300 more than the 1990 Exhibition. A lot of this cost is that of hiring the Silver Jubilee Pavilion ($4400) and advertising at $3500 is also a big component.

If the Management Committee accepts my recommendations on admission prices, this will mean that we have to encourage 5800 people to the Exhibition just to break even. Publicity will therefore be most important and in the next issue of The Branchline, there will be a pack containing some posters and handbills for you to distribute. Also, there will be a form for setting out when you (if you're not an exhibitor or otherwise already committed to the Exhibition) can assist in the running of the Exhibition. Finally, the pack will also contain a book of 20 raffle tickets for all who have not indicated last year that for various reasons (ethical, moral, religious, etc) they do not wish to receive raffle tickets in future. Student members also will not receive the raffle tickets in their packs in view of the legal aspects of young persons selling raffle tickets.

Your full support in all these aspects of running the 1991 Model Railway Exhibition is vitally important.

Garry Pilmoor
1991 Exhibition Co-ordinator

Layout Notes

To begin with, an apology! I had the wrong deadline for the last issue of The Branchline and the Layout Notes had to be ghost-written by our Editor. It resulted in my receiving 50 lashes for my tardiness (like Oliver, I asked for more, but in these hard times the taxmax took the extra 25!). This has whipped up my enthusiasm to get it right in future.

4 mm Scale Layouts

More work, under the control of Alan Higgs, on relaying bad sections of track on Haltwhistle on Tyne has removed most of the long lived 'bugs' from the track work.

The new locos have settled in and have been proven as good runners on both Haltwhsitle and one the Ossie Gully layout.

With regard to the plans for a 4 mm modular layout, these are still in formulation for the 1991 Model Railway Exhibition.

7 mm Scale Layout - Team Leader - Dennis Ling

The main line track work is now virtually complete and work trains have been seen creeping over the Brunel viaduct with loads for the construction of the fiddle yard. Wiring is under control and the layout is 'on track' for this year's Model Railway Exhibition. Is this a signal for yet another pun?

The layout has been named 'Ebford Regis'. Research has established that this name dates from Roman times when Boadicea herself crossed the then pristine River Eb in pursuit of Roman soldiers on the very spot where the stone viaduct now stands. Unfortunately, any relics remaining are now buried under the muck of Sir Richard Solling's mills.

The suffix 'Regis' is somewhat more obscure, but common belief has it that about 300 years ago, a certain crown prince used to indulge in secret assignations with the favourite daughter of one of Sir Richard's ancestors. When the scandal came to light, the wrath of the squire was placated only by a royal decree adding 'Regis' to the name 'Ebford', thereby assuring fame for the town and a 'sirship' (knighthood) for the squire!

To the left of the seven mile tunnel, just before the Brunel viaduct, lies St Agnes Halt, a popular stopping place for the nearby beach. The Halt was named after the Priory, the ruins of which are on top of the hill above the tunnel and can be discerned by the practised archeological eye (well not yet! The hill isn't built!!).

Ted Thoday has almost finished the broad gauge track in the station, complete with sand drag for exuberant drivers. It lies behind the standard gauge terminus.

2 mm Scale Layout

Events have overtaken us with the donation of 16 of the 'West-N-Trak' modules to the Branch by members Tony Gray (who was also a former President of the Branch) and Len Hughes. By the time you read this, the assembled modules will be gracing the layouts room at the Clubrooms, the tracks tested and our collection of N scale locos and coaches will have been brought out of their boxes (where they've been for a couple of years) and set running on the layout.

While it was my desire for us to build our own 2 mm scale layout, this donation is extremely welcome, as, with the exception of Ian Wood, any interest shown by members in building a 2 mm scale layout from scratch was minimal. Remember, the Colorado and Pacific Railroad was built by Club members who were 4 mm and 7 mm enthusiasts.

General Comment

Since my appointment as Layouts Co-ordinator, I have, through these pages, suggested various proposals for new layouts. Those proposals were intended to encourage members either to throw scorn upon the plan or to get together as a putsch to the Management Committee. The response so far, with few exceptions, has not been encouraging. This is very disappointing, as I believe our stated aim in furthering the art and the science of railway modelling is to have the members build the layouts in the Clubrooms as a learning exercise to further their expertise and then go home and show how it's done at Exhibition time.

So, you can imagine how I felt when opening the Suggestion Box (Drawer), I found a crumpled piece of paper (recycled) bearing just two words - 'Decent Layout'. Exit left, to sounds of stamping of both feet and rending of hair.

Footnote from Carol, wife of Layouts Co-ordinator

I find it disturbing that the 'author' of that constructive suggestion did not have the guts to put his/her name to it.

Roger Solly
Layouts Co-ordinator

Readers' Corner

These past few weeks I have allowed work to interfere with my hobby. However, I can now happily acknowledge donations of magazines from Des Edwards and Malcolm Thompson and some interesting *Fact Sheets* from John Ellis and Roger Solly. Ted Thoday has prepared and updated his *Railway Drawings Index* which will be spiral bound very soon. Thanks for this Ted and also your donation of a copy of Iain Rice's latest book *Etched Loco Construction* and two *Downesplans* books of scale lineside drawings for the British modeller - these are Book 1 *Country Buildings* and Book 2 *Railway Buildings*, both published by Peco. Additionally, Ted has donated a copy of the recently released booklet *Australian Steam* (Cat No P331), which contains '100s of previously unreleased photos of steam giants of yesteryear', so says the 'blurb' on the front cover - perhaps a slight exaggeration as there's only 92 of them!

If I have missed acknowledging any donations, please accept my apologies.

We also have a new video, *Making Model Railways - No 1: Basic Scenery* by Jack Kine. Jack was our guest speaker on 4 February and this video shows the practical application of some of the ideas that he shared with the large number of members at that meeting.

Barry Keens
Library Co-ordinator

Program

APRIL

1 Mon Video Night (Easter Monday)

Just light entertainment after the Easter break - relax and watch some video tapes. If you have one of which you're proud, bring it along and let us all have a look. Please note the copyright limitations that apply to the showing of some commercial tapes to club audiences. Also, please ensure that your tapes are cued up to the correct location and ready to play.

6 Sat General Club Activities

On these occasions you can use the Clubroom facilities as you wish - there's the Branch's new 9 mm gauge layout and the 16.5 mm gauge layouts on which you can run your own trains (or you can use the Branch's equipment), you can browse through the masses of information in the Library, you can join the workers on the 7 mm scale Ebford Regis layout and the Ossie Gully 4 mm scale layout, or if you feel you're not up to any of these more arduous activities, you can chat away with like minded enthusiasts!

8 Mon Sn3-1/2 Special Interest Group Meeting

A growing band of modellers of the Westrail 3'6" system in S scale (1/64) are attending these co-operative workshop sessions, where simple open wagons (such as the GC type) or more complex jobs (such as Wildflower Class power and trailer cars) are shown around and newcomers are encouraged to have a go, because you can't buy Sn3-1/2 items off the shelf. Why don't you come along and get involved in modelling the local scene?

10 Wed Auction

This Auction is limited in that only AMRA members may submit items for sale by auction, but non-members are welcome as buyers. The Auction Co-ordinator will, if requested, give consideration to using the Auction as a means of disposing of any model railway items contained in the estates of deceased persons who were not themselves members of AMRA, but who were friends of AMRA members.

The main rules for the Auction are printed on the reverse of the Auction Form, which will be available at the Clubrooms from Wednesday 27 March. There are some other Rules which were adopted by the Management Committee in January 1989 and these will be formally announced before the Auction starts.

Unsold lots will be returned only to the vendor, or if they are sold by private arrangement after the Auction (but still within the Clubrooms), they will be given to the buyer, but the Auction Co-ordinator must be told of this by the vendor. In this case, the normal 10% commission to AMRA will still apply. There is no limitation on vendors making private sale arrangements outside of the Clubrooms building, either before or after the Auction, and, in this case, there is no AMRA commission.

The Clubrooms will be open from 7.30 pm to allow for early marking up of the items for sale and their display to potential buyers. No lots will be received after 8 pm, so synchronise your watches now. The Auction will start at 8.15 pm sharp and no later.

13 Sat General Club Activities
15 Mon General Club Activities
20 Sat Special Project Afternoon

Assuming that the Editor and Publisher gets back from The Shaky isles on time and that contributors have their copy ready for when he gets back, this afternoon we will persecute the paper again - collating, stapling, checking, folding, enveloping and doing all sorts of things to get the April issue of The Branchline on the streets. Be there - your help is needed.

24 Wed Bring and Show

There's plenty of evidence of members getting stuck into new projects,. kit bashing, scratchbuilding and so on over the past few months (it's rumoured that some vacationing teachers have achieved more in the summer holidays than they do in a full year of teaching). so, BRING along that latest project, your latest acquisition, whatever - and SHOW it to the other members present and TALK about it for a few minutes.

27 Sat General Club Activities
29 Mon General Club Activities

MAY

4 Sat General Club Activities

6 Mon Modelling BR in the period 1948 to 1968 by Alan Porter

The last 20 years of the steam locomotive and the first decade and a half of diesel locomotive haulage were interesting years of change and there are many pitfalls in modelling this period. Special attention will be given to the various liveries used, when they were in vogue and whether they could be seen under the grime. This is a popular modelling period and there should be wide interest among modellers of the British scene in this talk.

11 Sat General Club Activities

13 Mon Sn3-1/2 Special Interest Group Meeting

15 Wed Exhibition Preparations

Preparation of the various items of infrastructure needed by the Branch to put on a good Exhibition (barricading, ticket boxes, visual screens, display boards, signs of all types - the list goes on) so that the 1991 Exhibition will run like a well oiled clock. Many hands will make light work.

18 Sat General Club Activities
20 Mon Exhibition Preparations
25 Sat General Club Activities

All meetings will be held in the Clubrooms at 24 Moojebing Street, Bayswater, right opposite Paddington Street. Moojebing Street runs of Guildford Road towards the Swan River about 50 metres east of the traffic lights which are opposite the Cresco fertiliser works.

The times of the meetings are as follows:
Mondays and Wednesdays - 8 pm
Saturdays - 2 pm

The Committeeman who is the Duty Officer for the day will open the Clubrooms at least 15 minutes earlier than the times specified above. Visitors are always welcome at any of the scheduled meetings - just introduce yourself to the Duty Committeeman (ask someone who he is). He will make you really feel at home by showing you around the facilities at the Clubrooms (which we believe are the best of any model railway club in WA) and by introducing you to some of the members present.

The fee payable by members covers some of our general operating expenses and entitles hot refreshment (tea, coffee or Milo) plus biscuit. No fee is payable by visitors - unless they keep coming week after week after week - without joining up.

Cool drinks are also available at modest cost from the refrigerator.

Notes from Paddington Market

Business has been brisk at Paddington Market over the past two months and stock-outs have occurred with some lines from time to time. We appreciate the patience shown by disappointed buyers, in particular those who wanted the fibreglass eraser pens or refills or the brass refills to suit the 'pen' and those who wanted magazine binders. We're going to get in new stocks of these items and if you want to be sure, let me know how many of each you want (ignore this request if you've already told me).

Fresh stocks of 10% phosphoric acid are on hand (the best soldering flux you can use) and we're about to top up our stock of MEK. Which reminds me - there have been some complaints that our MEK has 'gone off'. Now, MEK (or, to give it its full chemical monicker, *Methyl Ethyl Ketone*) just doesn't 'go off' - it is not easily oxidised by the oxygen in the air, it is a pure substance with no other chemicals present (apart from a bit of microcrystalline wax, as a consequence of its having been used for lube oil dewaxing), but it does EVAPORATE, especially in the hot weather. Its boiling point is about 80 degrees Celsius, so that when the temperature is about 35 degrees or more, it will have a great tendency to want to turn into a vapour. Which means, you should keep the stopper on the bottle at all times when you're not getting some out and you should also use it properly - by flooding it into the joint of two pieces of styrene held closely together, using a small brush for the 'flooding'. Do not expect success by brushing MEK onto one piece of styrene and then placing that against the second piece of styrene - by the time you've done that, the MEK has evaporated off the first piece and any solvency action it had there has ceased and the styrene has 'gone hard' again. You might be able to get away with this method in the winter months, but not in the summer.

No! Our MEK is A1! If you want to have a bit more time when assembling styrene pieces, then try either Testor's Plastic Cement (which contains 50% of *Methyl Iso-Butyl Ketone*, the next heaviest of the ketones after MEK, and 50% of *Methyl Cellosolve Acetate*, which is a good solvent for some of the other plastics) or Humbrol Liquid Poly (the composition of which is not disclosed on the bottle, but it appears to be more viscous, and therefore heavier all round including boiling point, than MEK). The Humbrol product is available around the town, but I'm told that the Testor's product is hard to get.

I've received some suggestions recently for new products to be carried by Paddington Market. Among them are as follows:
lead shot
lead sheet (of various thicknesses)
syringes and needles (for oiling)
No 56 self-tappers
nickel silver wire
Wahl hair clipper oil

Any more ideas before I go a'shopping?

John Martin
Sales Co-ordinator

Welcome to Moojebing Market

'MOOJEBING MARKET! What's that?' we hear you say.

Well, it's the Branch's latest service to its members. It's another way for them to

sell their surplus model railway equipment other than the three auctions held annually by the Branch.

Where is it? How does it sell my gear to the other members?

It is based on a newly renovated wall mounted showcase in the Branch's Clubrooms at 29 Moojebing Street, Bayswater, and will be seen by the 20 or more members who come to each of the nine or 10 meetings held each month at the Clubrooms. Although the same members come to most of the meetings, there would probably be some 70 to 80 potential buyers able to look at whatever's on offer each month in MOOJEBING MARKET. The showcase has eight shelves, each 820 mm long and between 130 mm and 180 mm wide. Each shelf can accommodate items up to 130 mm high, but, by special arrangement involving removal of one shelf, items up to 260 mm high can be shown. Therefore, the items displayed for sale can include modest sized buildings, trees, etc, as well as locomotives, rolling stock and items of track work.

To sell your unwanted model railway equipment, bring it along to any meeting, contact the Duty Officer (his name is displayed on the wall above the Attendance Book) and he will be pleased to record all the details of your equipment, attach a Sales Ticket showing an identification number and the selling price and place the items in the best position available in Moojebing Market showcase, which will be locked at all times. You will be given a Receipt for the items that you have left to be sold.

When (and if) your items are sold, the day's Duty Officer will record the details on the Register containing the details of equipment you had left. At the end of each calendar month, the Treasurer will prepare a Branch cheque for 90% of the amount/s for which the item/s sold and this cheque will be mailed to you.

As can be seen, the Branch will retain the Selling Commission of 10% of the amount realised, the same as at the Branch's auctions.

It is necessary to charge this commission

a to recover the $54+ spent in renovating and modifying the showcase, including the security locking arrangements;

b to cover the administrative costs associated with the scheme (postage costs, stationery, bank account charges, such as BAD and FID);

c to cover whatever additional insurance premium we may have to pay to cover the increased value of 'stock in trade'; and

d to provide another way for the Branch to raise funds.

To start the scheme off, there will be a THREE MONTHS maximum display period for items for sale, after which they will be replaced by items owned by any member on the 'waiting list'. Of course, should there be space still available after three months and no-one 'waiting', the items may remain on display until the space is needed.

It is hoped that members will support this scheme, as well as thrice yearly auctions (which will continue). Any suggestions for its improvement will be welcomed.

Alan Porter

for the Management Committee

PS The name....

There was so much flak about the naming of our general sales outlet 'Paddington Market' (many believing that "God's Wonderful....." had taken over; wrongly, of course!) and insisting that it should have been Moojebing Market that we just could not overlook 'MM' for this, our latest venture.

So, MOOJEBING MARKET for sales of members' unwanted gear, PADDINGTON MARKET for general modelling sales to members.

Attention Myopes

by Ian Wood

I know you're out there - I can hear you breathing! I'm talking to all you myopic fools who think N scale is the way to go.

Come out of the closest (actually you could build quite a reasonable layout in there, although the coffee table still has more going for it). It's time to own up, all you N scalers, because things are moving. Action is about to happen at the Clubrooms, because we now have some 9 mm gauge track in there. (You will note that I use the correct terms: N is the scale, 9 mm is the gauge.) So here it is, your first and final call - if you're into N scale and you want a large decent layout on which to run your locomotives and stock, now is the time to step forward. Please don't wait until the layout is fully developed and then appear mystically out of the night with small boxes in hand and ask 'Can I run these?'. Heaven forbid, someone may make a suggestion on where you could run them - and in N scale, it's not out of the question!

I think I can enlighten those interested enough to have read this far that we have had donated some 16 modules with 9 mm gauge track by members Tony Gray and Len Hughes. Before this occurrence, it had been announced that considerable research and planning was in hand for a brand new layout and this concept had received favourable nods from the Management Committee. This work has been put 'on hold' until we can scrutinize our new inheritance with an intense scrute and a decision made whether to leave the layout as assembled (with not all of the modules in use) or to incorporate some or all of them in a new layout.

That's where you tiny train people come in. Hands up now, there may not be a lot of work to do, but don't wait. Ask a member of the Management Committee or the Layouts Co-ordinator (Roger Solly) - open your mouth!

Glossary

myopia - short-sightedness, a condition of the eye in which the rays from distant objects are brought to a focus before they reach the retina and so form a blurred image.

hence **myope** - short-sighted person.

A myope, although 'short-sighted', has no trouble seeing small objects up close to him. However, let's hope that everyone, including the Management Committee, will be hyperobic on this matter.

hyperopia - far-sightedness.

Handy Hints

from Ted Thoday

Recently my Mini-Scope soldering iron reached the stage where I just had to replace it or to give up soldering.

A visit to Dick Smith's turned up a packet containing two elements and two tips, a No 21 (the one usually fitted - the fine pointed type) and a No 1A/21.

As the job in hand involved soldering 7 mm scale rail, I decided to use the 1A/21 - a real mean beasty, this turns out to be. It takes the full available 80 watts and transfers it to the item being soldered far more efficiently than the smaller pointed tip.

The 1A/21 is about 7 mm across the blade. As the two types of tip are 'screw in' replacements, they are easily interchangeable. I doubt there is any need to invest in the larger Scope iron also available.

Unfortunately, the price tag is indistinct so the product code and the price are unreadable - memory seems to indicate a price of around $6 - just walk in and ask!

From Jim Crawford

1 When mixing small quantities of epoxy resin (Araldite or similar), waste can be minimised by using the small screw cap which normally seals soft drink bottles.

Larger quantities can be handled in the pressed aluminium party pie dishes that are normally discarded with the rubbish. These dishes are also useful as solvent baths when soaking small components.

2 Wayward spills of epoxy resin can be successfully cleansed by using white vinegar as a solvent. This hint applies to when the mixed epoxy resin is in the liquid state - it's too late when set!

3 'Swarfega', 'Protect-o-clean' and other brands of workshop hand cleanser are useful for dissolving grease and oil spots on clothing, prior to laundering.

These also work on masonry suffering from the effects of graffiti, but you do need patience.

4 Storage of machine tool accessories and tools in general over an extended period can be a problem, particularly with rusting.

Try spraying the components with WD40 or similar and placing them in an ordinary freezer bag. Evacuate the plastic bag (with Mum's little hand pump, but don't get caught) and seal with a wire tie in the usual manner.

I have successfully stored tools and instruments in this way for over six years. It seems that the freezer bag makes a very effective vapour seal - no vapour, no rust.

Flush Glazing Windows

by Alan Higgs

When assembling a Broad Gauge Bodies' HO scale kit of a Victorian Railways ZLP guards van, I wanted to add the finishing touch with prototypical flush glazed windows. The following technique proved successful and has since also been used to glaze cab windows in a Broad Gauge Models' kit of the Victorian Railways A2 locomotive. With careful work, clear, flush window glazing can be achieved at minimal cost. Note that access is needed to the back of the window frame.

Technique

Laminated clear acetate sheets (from shirt boxes, etc) bonded with Tarzan's Grip general purpose adhesive.

The chemical composition of Tarzan's Grip is not stated on the tube or the packet, but I tried it because acetone can be used to clean it up. It does work and the bond cures perfectly clear. Acetone might also work. As many acetate pieces as are needed are laminated to match the wall/frame thickness of the model and a backing sheet

is added allowing permanent fixing in place at the back of the window.

Details

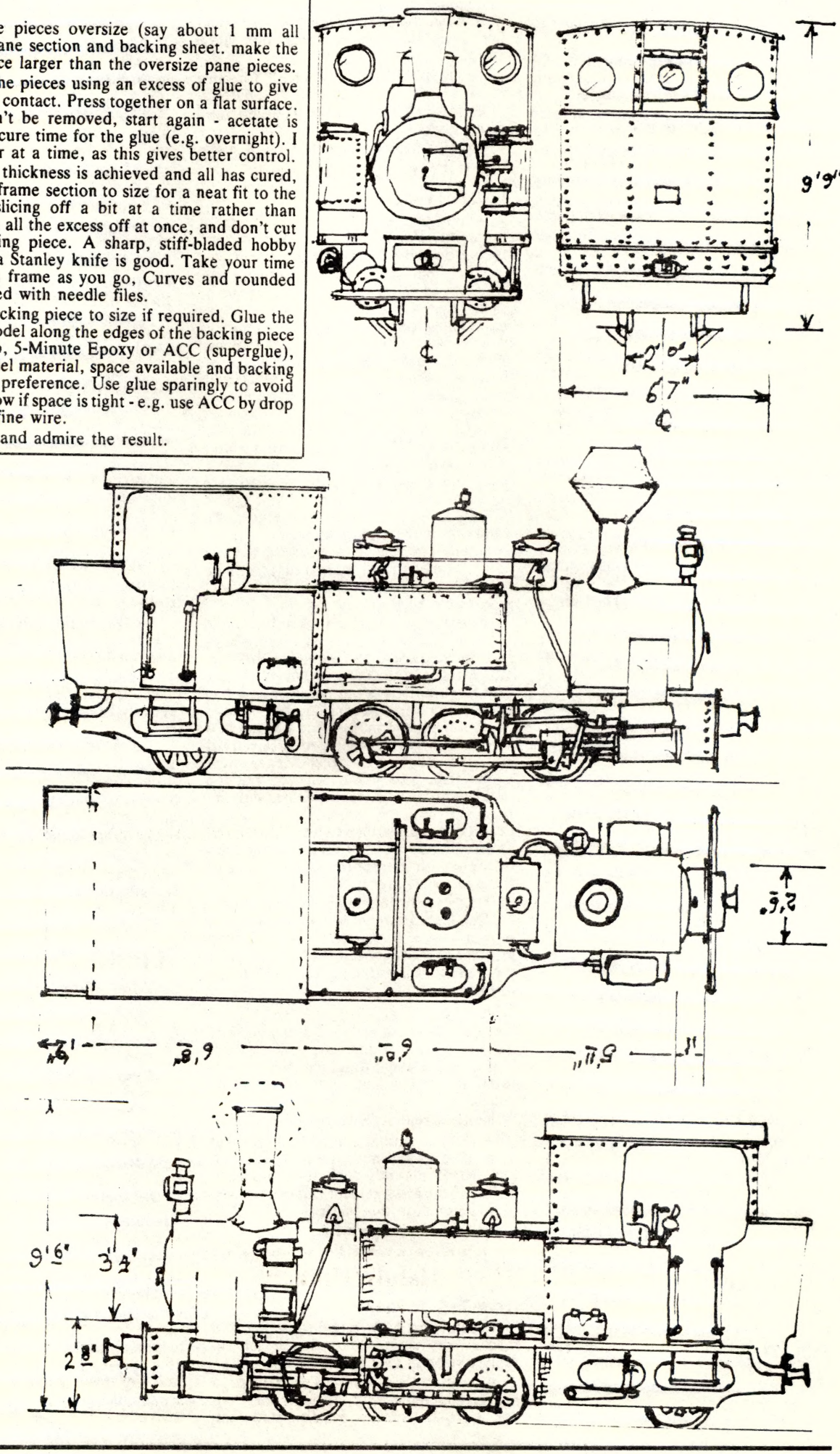
1 Cut acetate pieces oversize (say about 1 mm all round) for both pane section and backing sheet. make the backing sheet piece larger than the oversize pane pieces.

2 Laminate the pieces using an excess of glue to give total surface bond contact. Press together on a flat surface. If air bubbles can't be removed, start again - acetate is cheap. Allow full cure time for the glue (e.g. overnight). I laminate one layer at a time, as this gives better control.

3 When total thickness is achieved and all has cured, trim the windows frame section to size for a neat fit to the frame. Trim by slicing off a bit at a time rather than attempting to take all the excess off at once, and don't cut through the backing piece. A sharp, stiff-bladed hobby knife is needed - a Stanley knife is good. Take your time and trial fit to the frame as you go, Curves and rounded corners can be filed with needle files.

4 Trim the backing piece to size if required. Glue the assembly to the model along the edges of the backing piece with Tarzan's Grip, 5-Minute Epoxy or ACC (superglue), depending on model material, space available and backing sheet size, or glue preference. Use glue sparingly to avoid smearing the window if space is tight - e.g. use ACC by drop from the tip of a fine wire.

5 Stand back and admire the result.



Buderim Krauss 0-6-2 used to work 2'6" line from Palmwoods to Buderim, South Queensland. Drawn by Jim Fainges